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VOL. V, No. 2 APRIL, 1937

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The President's Message

THE number of people concentrated in relatively small urban areas in our country is constantly increasing. There is a resultant growth in crowding and congestion.

Due to this trend, which is one of the consequences of the centralization of industry and commerce in the same areas, the uses to which urban land is put are becoming ever more varied and intricate.

As a result of these continual changes and adjustments, the problems of real estate usage and management are growing more complex, and ***the process of estimating real estate value is becoming more and more technical in character.***

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AMERICAN INSTITUTE OF REAL ESTATE APPRAISERS

of the National Association of Real Estate Boards

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This publication is provided as a medium for the expression of individual opinion concerning appraisal practice and procedure and topics allied thereto. The articles printed herein do not necessarily represent the endorsement of the Institute nor of the majority of the members excepting as such statements may be designated as approved by the Governing Council. The Editors exercise only a general supervision of the material and assume no responsibility for the opinions expressed by the contributors.

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• With The Editors •

WITH its next issue, July, 1937, the ***Journal*** will inaugurate a series of contributions on legal subjects consisting of digests of cases, decisions, and other matters involving rulings and precedents affecting real estate and valuation. The articles will be written by William Wilson, a member of the firm of Kirkland, Fleming, Green, Martin and Ellis, of Chicago, a lawyer with a wide knowledge of and long experience in real estate matters.

These articles will be of great interest to those concerned with the ownership, management, and regulation of real estate and in the many divergent problems relating thereto, as well as to Realtors and appraisers generally.

• • •

IT'S TIME TO PUT ON THE BRAKES

The young and suave Mr. Jackson, Assistant Attorney General, shocked the members of the Senate Judiciary Committee during the "Court Packing" Inquiry by suggesting that Supreme Court Justices need not necessarily be lawyers and that ***engineers*** might well be better fitted for the job. In the current vernacular of the theatre district, we think perhaps "he's got something there!" We wonder, however, whether the fact that a great engineer, perhaps America's most noted engineer, was largely responsible for the present near-balance in the complexion of the Court may not have motivated Mr. Jackson in making such suggestion. Is it the constructive force of the mind trained along engineering lines that he desires? Or might it be the lack of political sagacity that so generally appears to accompany it?

Whatever the reason, it is increasingly evident that the engineer is rapidly gaining his place in the sun and that a bigger job is cut out for him in the future. One of the first tasks and not the least must be in a broad revaluation of national standards and relationships that have become distorted through the rigors of business depression and the more recent period of artificial respiration. ***Values,*** based upon the natural economic forces of human needs and desires, supply and demand, and competitive endeavor, are by way of becoming nothing more than "price tags" indiscriminately distributed.

We, as appraisers, specializing in a certain field of engineering, can do much toward the preservation of property rights by the promotion of value concepts that are sound, sane, and fundamental to the permanence of our form of government. The rapid and accelerating expansion of the ***business*** of appraising by various units of our Federal Government is bringing more and more uneasiness to the appraisal profession. Appraising is no more a job of government than is the practice of medicine. It is rather the job of the individual—localized diagnosis and treatment by the experienced practitioner—not by generalized formulae through governmental edict.

Properly directed and limited, the resources of the Federal Government can assist tremendously in the development and promulgation of sound standards of appraisal practice. We, as appraisers, should assist toward that end—but as a ***job*** it is ours—we should insist upon it!

• • •

IMPROVING YOUR GAME

We know golfers who have been playing around the links for fifteen years and who still slice, hook, press, and eventually hole out in the nineties. They will never be winners of prizes for low gross. Their experience

has taught them nothing. Their practice has served only to entrench their faults more deeply, not to correct them. They would be insulted if you suggested that they take lessons on the fundamentals of the game.

We are always suspicious of the appraiser who "knows it all." Usually, he is a man with little real experience. It is possible to "appraise" thousands of properties and get nothing but practice in unsound procedure—and never learn how to form a supportable estimate of value. Experience that counts is always illuminated by ***thought,*** checked by thorough ***deliberation,*** and tested by critical ***comparison*** with the solutions of similar problems.

Real estate appraising is not a science; but the professional appraiser uses the scientific method in solving valuation problems. He has learned from experience that the use of shortcuts, formulae, and techniques is risky business unless their nature, their origin, and their limitations are clearly understood. He knows that there is infinite variety in the multitudinous factors that create, condition, and limit value. He knows that no two properties are ever exactly alike, that value cannot be measured nor determined with precision, and that each appraisal is a new, social-economic problem—not a routine exercise in mathematics.

The professional man is characteristically a student. He is constantly alert to new developments in his field. He is a critical reader of technical journals and books. He seeks opportunities to attend clinics and postgraduate courses from time to time. This is true of the physician, the engineer, the lawyer, the teacher—and it is becoming true of the real estate appraiser. It is significant that a large percentage of the students who enrolled in the Institute's Case-Study Courses in 1935 and 1936 were M. A. I.'s.

• • •

APPRAISING THE SALE

The increasing attendance at the sessions of the Institute held at the various Regional Meetings is most significant. It shows convincingly the growing interest of Realtors in appraising. The Realtor who is wide-awake and looking forward to the coming boom in real estate is finding that an understanding of valuation fundamentals and property analysis will help in his business. A greater knowledge of value may save much unproductive effort and expense in attempting to move properties that are priced too high—it will build a stronger clientele and increase his ultimate profit.

An actual appraisal of a property is not always required to sell it. The knowledge that the holding price is within the range of reasonable value may be, however, a matter of considerable moment. In a recent important case one of our Realtors was on the witness stand. He had appraised the land only, owned and used by a large industrial enterprise, the appraisal having been prepared for rate-making purposes, and he had based and supported his opinion of value by comparison with actual sales, many of which he had personally negotiated. In cross-examination, he was asked whether or not it was his practice to make an appraisal of the industrial properties which he might be called upon to sell. He stated that this was not his practice, and when further asked to explain what he did, he replied substantially as follows: "Oh, no, I make no appraisal of the properties. A man comes into our office; he tells me that he has a piece of land for sale; I ask him what he wants for it; it is listed on a card; and then I go out and try to find a customer."

It is more than probable that this is not a correct statement of the Realtor's actual procedure. He no doubt meant that he did not actually make a detailed appraisal investigation and report upon the property but that, based upon his long experience and knowledge in the district, he did in effect arrive at a conclusion as to the reasonableness of the price asked before he agreed to push the sale. The statement, however, was misleading and rendered his testimony far less effective.

This Realtor might gain a great deal to his ultimate benefit, just as others have, by attendance at the appraisal session of the Regional Conventions, even though he might not intend actively to engage in appraisal practice.

The JOURNAL *of the*

AMERICAN INSTITUTE OF REAL ESTATE APPRAISERS

of the National Association of Real Estate Boards

Volume V APRIL, 1937 Number 2

The Appraisal of Cemeteries I

By MARTIN W. LEDERER

This is the first of two articles dealing with a subject that is a particularly pertinent one at the present time and upon which virtually nothing has been written. The author speaks from a wide experience in practical appraising of cemeteries. His second article will deal particularly with cemetery appraisals for Federal Income Tax purposes, wherein the question of land depletion is of such current significance.—Ed.

THE appraisal profession, when pursued through its various fields and ramifications, offers innumerable interesting and fascinating subjects besides those encountered in the usual residence, business, and industrial property appraising, but there is probably no one subject, particularly in land valuation, that offers a more complete study of land development and improvement, finance, and generally related economics than the appraisal of cemeteries, which involves, as the major concept, the "value of a going business."

The small number of cemeteries in the country in comparison to other types of real property affords even the specialized appraiser very little opportunity of familiarizing himself with their operations and value from first-hand knowledge or experience, but the divergent problems accruing to this type of enterprise are similar in character, when taken individually, to those encountered in general appraisal practice.

This article is intended to summarize the basic considerations necessary for the promotion, operation, and valuation of a cemetery, and while a part of the discussion may seem elementary to those who are familiar with such enterprises, it is believed that a proper understanding of the fundamentals is essential to a consideration of the problems of valuation.

There are several major purposes for which the management of a cemetery may require an appraisal, and the analysis and conclusions pertaining to each purpose are necessarily a part of a complete investigation and report. The appraisal may be for such basic purposes as:

- Financing, reorganization, stock valuation, transfer of interest, and similar purposes.
- Determination of profit and loss for state and Federal Income Tax purposes.

Or perhaps a limited or specialized service is desired for various internal corporate policies, such as:

- Adequacy of perpetual care reserves.
- Requirements for annual increase in sales price to offset fixed and anticipated carrying charges.
- Purchase and development of new areas contiguous to an existing cemetery, etc.

THE NATURE OF A CEMETERY ENTERPRISE

A cemetery enterprise in some respects is not unlike the subdivisions of industrial or residential lands developed and sold in lots or units for investment or for actual improvement. The land area is purchased,

platted, and developed to its highest utility, based upon previously demonstrated standards and such innovations as the management may consider feasible. The units so developed are sold under definite restrictions at established prices and for a specific purpose. The sale price of these units is established to include the recovery of the original investment in the land, land improvements, structures, and promotional and engineering fees, together with a sufficient additional allowance to cover sales costs, perpetual care reserves, and the profit to capital.

As in other types of subdivisions, there is waste land comprising roads and walks, service building sites, lagoons, floral beds, and parks—the remaining lands being generally termed "salable area." The planning and layout of these salable units will include provision for burial in single graves, on family lots, and in family mausoleums. In the modern cemetery a monumental mausoleum with crypts, cremation facilities, chapels, and related features may be a part of the development.

The land improvements are planned for general beautification of the grounds and generally comprise roadways, lawns, floral beds, shrubs, and trees. Complete sewerage and water systems are also necessary for proper maintenance and drainage. A chapel may be constructed as a separate building. General service buildings and property enclosure fences make up the main items of essential building construction. Ordinarily a mausoleum is treated as a separate part of the enterprise and is planned, sold, and must be valued separately.

A sales organization must be formed to market the units. Broadly, a sales program must be developed that will provide for the disposal of these units within the shortest possible time commensurate with a profitable price and with a planned annual price increase per unit to offset accruing carrying charges in so far as possible.

While the above outline may seem to be relatively simple, it should be remembered that each step in the promotion and valuation of a cemetery must be analyzed upon a comparative basis and due consideration given to the history and experience over a long period of years of other similar enterprises; thus, new and modern plans of development, operation, and sales may be incorporated in the venture. Furthermore, the sales plan and unit prices must be basically sound as to the anticipated amount of annual sales (usually expressed in square feet) and the annual increase in unit prices during the period when the property in its entirety is approaching its ultimate stage of stable development.

VALUATION FUNDAMENTALS

It will be apparent from the preceding narration that the value of the enterprise is entirely dependent upon the profits that accrue to the developer over the life of the project. As each unit of property is sold, a portion of the original invested capital is also sold, and, ultimately, when the last unit is disposed of, the original owner ceases to have any equity in the property or the enterprise. It is obvious, therefore, that each sale must return to the developer a sufficient sum to provide for depletion of his capital investment, together with the cost of sales, the reserves for perpetual care, and whatever profits are to accrue. It is also obvious that these profits will accrue gradually over a long period of time and that their worth to the developer will be lessened as the length of time for complete disposal increases.

In effect, these profits become annuities in varying amounts over the life of the enterprise and, when properly capitalized to reflect the risk involved and properly discounted to reflect their deferment, indicate the amount or capital sum that may be termed *value*.

The measure of such ultimate profits, the time element involved in their realization, and the relative risks and hazards in-

volved compared with the investment of capital in other types of real property are decisions that the entrepreneur must make with extreme care. The estimates must be founded upon the conditions apparent or expected in the specific community in which the project is to be operative. In like manner, the appraiser at any given date can determine the worth of the remaining property by a similar analysis.

There are other theories of cemetery valuation procedure which have been tried and used, but they are fundamentally based upon the premise of the worth of the annuities. I recently reviewed an appraisal which purported to show that the average selling price of lots as of March 1, 1913, was a fair basis of value of all the remaining salable area as of that date upon the assumption that the anticipated increase in price over future years would compensate for the sales costs and deferred interest. This premise, in fact, is exactly the same in that it presupposes that the present worth of the burial units, represented by the current sales price, will prevail until entire depletion and the loss of interest on the remaining unsalable area will be offset by periodic increases in value in the exact amount of the compound interest.

A recent United States Supreme Court Decision, reversing the United States Circuit Court of Appeals and sustaining the Board of Tax Appeals, in re: Commissioner of Internal Revenue, Petitioner vs. the Elmhurst Cemetery Company of Joliet, stated that the March 1, 1913, unit value of certain lots in a specific cemetery was identical with the average 1912 sales price as a basis for depletion. The taxpayer had entered a claim upon the basis of the 1912 sales price, presumably under the assumption that the increase in value would offset the carrying charges as stated above. This referred to certain lots sold in 1926, 1927, and 1928. Whether the court would substantiate the value of an entire cemetery upon this basis, and to what extent the area for future expansion would be recognized, is questionable.

The period of time required for disposal of the salable area is of further importance in that it affects the area which may properly be included as part of the going business. Adjacent lands are often acquired for further development and held for many years in anticipation of use. They are tax free as part of a cemetery development, and the small original cost in relation to the eventual sale price allows for their holding over a long period of time. Obviously, as the unit square foot price of the salable lands increases, the expectancy of realization from excess lands increases. This is offset by increasing amounts of unrealized return on the investment as the time element lengthens.

As an example, there has been tabulated in the following for comparative purposes an assumed condition in which the adjacent excess land was purchased for $1,000 per acre and the sale price of the lots in the cemetery proper was $2.00 per square foot. It has been further assumed that the cost of development was twenty cents per square foot, the perpetual care fund twenty cents per square foot, the cost of sales thirty-five per cent, and the salable area in each acre 30,000 square feet.

The second column shows the price that would have to be realized from the sale of the land in acreage prices in ensuing years if the original investment of $1,000 per acre is to be recovered and in addition receive a return of eight per cent per annum, and the third column shows the same result in square foot prices.

The last column shows the present value of the gross realization of ninety cents per square foot, or $27,000 per acre, as deferred over the period of recovery:

Gross Sales Price		$2.00
Cost of Development	$ .20	
Perpetual Care Fund	.20	
Sales Cost 35%	.70	1.10
Gross Realization		$ .90

(1) Deferred Period	(2) First Cost of $1,000 per acre plus interest compounded at 8%	(3) Per Sq. Ft.	(4) Present Value Factor	(5) Present Value of Gross Realization
5 years	$ 1,469.33	$ .034	.68058 x 27,000 =	$18,375.66
10 years	2,158.92	.05	.46319 x 27,000 =	12,506.13
15 years	3,172.17	.073	.31524 x 27,000 =	8,511.48
20 years	4,661.00	.107	.21455 x 27,000 =	5,792.85
25 years	6,848.48	.157	.14602 x 27,000 =	3,942.50
30 years	10,062.66	.231	.09938 x 27,000 =	2,683.26
35 years	14,785.34	.339	.06763 x 27,000 =	1,826.01
40 years	21,724.52	.50	.04603 x 27,000 =	1,242.81
45 years	31,920.45	.73	.03133 x 27,000 =	845.91
50 years	49,901.61	1.08	.02132 x 27,000 =	575.64
55 years	68,913.86	1.58	.01451 x 27,000 =	391.77
60 years	101,257.06	2.32	.00988 x 27,000 =	266.76
65 years	148,779.85	3.42	.00672 x 27,000 =	181.44
70 years	218,606.41	5.02	.00457 x 27,000 =	123.39
75 years	321,204.53	7.37	.00311 x 27,000 =	83.97
80 years	471,954.83	10.83	.00212 x 27,000 =	57.24
85 years	693,456.49	15.92	.00144 x 27,000 =	38.88
90 years	1,018,915.09	23.39	.00098 x 27,000 =	26.46
95 years	1,497,120.55	34.37	.00067 x 27,000 =	18.09
100 years	2,199,761.26	50.50	.00045 x 27,000 =	12.15

It will be apparent from this study that lands purchased at $1,000 per acre and eventually salable at $2.00 per square foot, resulting in a realization of ninety cents per square foot, and which under the usual law are free from real estate taxes, can be held for a period of not more than forty-two years, at which time future holding becomes a liability, since the present worth of the ultimate realization becomes less than the original investment for subsequent years; that is, upon an eight per cent basis the original investment of $1,000 reaches about $27,000 in forty-two years, the present worth of which would be about $1,000 or the original investment.

Therefore, if a cemetery development, having a similar economic set-up to the one assumed herein, also has lands greatly in excess of apparent requirements, these lands should be valued at only their market value for other purposes as excess holdings. Their sale value for other purposes should be their minimum value, however, as it represents virtual liquidation in the general real estate market, and in turn will represent the maximum value if their sale period is extended over any great length of time. This example shows that there is a very definite limit to the amount of acreage that can be included as part of a cemetery. This also illustrates a method of determining an economic life even if there is an apparently active market for sales of cemetery lots over an indeterminate period.

In like manner, the adopting of a present worth analysis should not penalize lands to a degree or in an amount that reflects a lesser value than the present real estate market would justify as acreage.

THE DEVELOPMENT OF THE MODERN CEMETERY

The following discussion outlines, first,

the promotion and development of the property from the time of acquisition and covers the improvement stage and the sales plan and, secondly, deals with the property from the valuation standpoint when partially or fully completed.

It will be found that the appraiser's approach and the promoter's approach are generally similar, although the conclusions may be subject to individual interpretation.

The first step is, of course, a consideration of competitive cemeteries, either in the city itself or in nearby communities. The establishment of a "marketing area" for the sales program necessarily includes a consideration of the territory in which the lots can be sold and the competitive cemeteries in such areas. Small town cemeteries are often competitive as to sales with developments in nearby large cities, and, inversely, small towns near large cities are potential markets for the sale of burial space.

Originally burials were made in or close to the center of a community. In the pioneer days in this country burials within or close to forts were made to preclude the destruction of graves by Indians or animals. In southern countries, and even in some of our southern states, the high water table or flood possibilities required "above ground" burials. The Metairie Cemetery at New Orleans is an example, comprising essentially mausoleums with the burial vaults considerably above ground. The original group or community burials in this country were confined largely to church yards and adjoining acreage, and this custom is still the predominant manner of burial in small communities.

As cities grew in population and death rates increased, these areas became crowded, with the result that outlying sections were secured in large tracts and devoted solely to burial space. Sufficient areas were purchased at relatively small unit prices to last for several hundred years, giving permanence and stability to the location. This latter type of development was sponsored principally by churches or municipalities; the profit motive was not controlling but rather the need for such areas and the then accepted responsibility of the churches for their deceased members.

The latter part of the nineteenth century witnessed the first general movement of private capital into cemetery developments, and even then general community requirements dictated such investments, as well as the possibility of profit. From that time until the advent of the Memorial Parks of 1927 to 1930 private capital investments accelerated, reaching a point where purely promotional ventures were started, without demonstrated need and with immediate profit as the sole motive for their development.

It is obvious that this period should and did provide definite improvements in types of cemetery developments as compared with the earlier type of "burial grounds." Originally the minister of the church assumed the responsibility for taking care of the graves in the adjacent churchyard. When the burial grounds were located in the adjoining countryside, away from the church, the families of the deceased assumed this responsibility. Eventually they made arrangements with the cemetery management for this grave care by payment of an annual stipend. As families moved away from the community or died out, the graves were uncared for and became overgrown with weeds and generally disreputable. This not alone affected the individual plots but very definitely affected the appearance of the whole cemetery and became a matter of general concern to all holders of plots. The cost of maintenance to the cemetery became prohibitive, and eventually a "perpetual care" arrangement was made whereby a sum of money was paid to the cemetery or a trustee and the interest derived therefrom used for such perpetual maintenance.

Eventually this plan was correlated with the purchase of lots so that a lot purchase automatically included sufficient monies for perpetual care. In more recent years this became a law in many states, and now all new cemetery developments include arrangements for perpetual care as a part of the purchase price of the lots. The most accepted arrangement consists of naming a well-known bank or trust company as trustee and placing a stated percentage of the monies collected from the sale of lots with the trustee immediately upon the consummation of the sale.

The early cemeteries were disfigured also with indiscriminate plantings, giving no appearance of uniformity or beauty. Headstones were sometimes of wood or of various sizes and types of stone. New cemetery developments of the past ten years have now generally eliminated all headstones, substituting instead bronze markers set in concrete at ground level. Besides the uniformity of appearance, this latter plan allows for power mowing of lawns over large areas as compared with hand mowing where moundings, floral beds, and monuments are indiscriminately placed.

In more recent years, and as a part of the general plan of uniformity, mausoleum lots were set aside for family burials as were also certain sections devoted to single graves. Improvements, such as chapels, large multi-burial mausoleums, and sprinkler and drainage systems were included in later developments. Park sections were set aside and lagoons and bridges built to enhance the beauty of the property.

FACTORS TO BE CONSIDERED BY THE ENTREPRENEUR

These later developments have now become integral parts of new cemeteries and are the important sales points in the presentation of lots for sale to the general public since they offer more in general desirability and utility than do the older type and lessen sales resistance. These modern plans, restrictions, and arrangements are, of course, quite general and are necessary from a competitive viewpoint in new enterprises. They are discussed herein as a base for comparison with the older existing cemeteries, being extremely important as the preliminary step in the investigation and valuation of either an old or new cemetery.

Various statements have been made as to the proportion of cemetery lots that are salable in given communities, based upon population, death rates, and other factors. It is my firm belief that these relatives are broad guides only and not necessarily controlling. Obviously, a high pressure promotional sales organization will sell more lots in one year than a static management which awaits voluntary purchases. Equally as contributory is the relative number of available cemeteries and cemetery lots in the particular community. Also pertinent is the fact that cemetery lots are sold in part at least considerably in advance of their actual use, and this advance sale is largely dependent and can be demonstrated upon the basis of the previous two conditions.

The potentialities of the enterprise, its relative chance for success, and its future position as compared to similar developments in the community must be gauged, therefore, upon other factors, and the following economic considerations are believed to be equally as important as recorded statistics:

1. Are the other existent cemeteries modern as to design and layout, well kept and appealing as to social status?
2. Are they proportionately well sold in advance of the space actually occupied?
3. What is the relative amount of space available for burial to present owners and available for sale to new families?
4. Based upon the present death rate and burial permits, when will these existent cemeteries be obsolete as to sales of vacant lots?
5. What appeal can be woven into a new development that existing cemeteries do not have, as an offset to family tradition, habit, and inertia?

6. Can a lower price be established?
7. Will a memorial park be more salable because of its elimination of headstones and generally more pleasing in appearance?
8. Will a modern chapel be an attraction?
9. Is mausoleum space salable for entombments or for cremations?
10. Does the community have sufficient wealth to provide a reasonable expectation of a definitely increased "sale in advance" program?
11. What is the proportion of non-eligibles of the total population, because of race or creed?
12. Can agreements be made with religious bodies and lodges for allocation of space to be consecrated or used solely for burials of people of particular faiths or memberships?
13. What are the perpetual care arrangements of competing cemeteries? Can a more satisfactory plan be evolved and embodied in a new sales program without bringing the cost per unit out of line with competing prices?

Each community will vary as to potential sales, depending upon these competitive conditions, the apparent rate of growth of the city, and the wealth of the community, and accordingly I have not attempted to establish averages or standards which might be interpreted as being a fixed measure for promotional ventures. It will be obvious to the experienced appraiser that standards in one community will vary greatly from standards in another and that the sound judgment of the appraiser or entrepreneur regarding these variables will determine the value of the analysis made.

SELECTION OF THE LAND

Assuming that the study and investigation show a definite need for such an enterprise and that the venture indicates a reasonable chance of profit, the next step is the acquisition of the land. The original cost of the land is not nearly as important as the character of the site. Generally, lands adequately suited for development will not cost over $2,000 per acre in metropolitan areas, equivalent to four and one-half cents per square foot.

Lands in a transitional stage as between farms and subdivisions can often be purchased for as low as $300 per acre, although experience shows that $1,000 to $1,500 per acre represented fair averages for cemetery lands from 1925 to 1930. It is important to bear in mind that about sixty per cent of the area will be salable; therefore, an allocation of the cost of $2,000 per acre to the salable area (60% x 43,560 sq. ft.) provides a unit cost of seven cents per square foot, while the selling cost of the lots in the completed area would probably be established at around $1.00 per square foot and be graduated over a period of years to $2.00 and $3.00 per square foot.

It is obvious, therefore, that a differential of $1,000 per acre, or two and one-quarter cents per square foot overall and three and one-half cents per square foot for the net salable area, is not the important factor and that a wide leeway is allowed in the purchase of land, thereby providing for the acquisition of the best possible site available.

The type of site selected for the cemetery location includes the consideration of several factors, some of which are important in effect upon the future costs of site preparation and nonsalable areas and some of which are important as to the sales plan and advertising advantages of the location itself.

These major factors of location and topography are as follows:

The site should be fairly level overall to eliminate excessive grading or filling costs but should have enough slope to allow for natural drainage and landscape treatment.

The site should be on or close to outlying arterial highways, and it is preferable that it be close to interurban or city street car transportation.

The site should be high enough to afford good visibility from the adjoining roads and to permit the buildings properly located to provide a landmark for the entire vicinity. This will attract casual visitors and help the sales program by word of mouth advertising, as well as provide easy accessibility for prospective clients reached through the medium of newspaper or direct advertising.

The soil should be a sandy loam to allow for good drainage and a low water table and to provide for simple excavation. Hard clay will require more costly and time-consuming working conditions for both the landscape treatment and burial excavation.

The site should be well wooded with large trees in sufficient numbers and well spaced over the whole area to subordinate the planting of new trees, and thus reduce the detrimental time element necessary for their growth to maturity, during which period the eventual plan and design of the cemetery would not be of pleasing appearance.

PLANNING, ENGINEERING, AND DEVELOPMENT PROGRAM

The original engineering, survey, and layout work should contemplate the complete development of that portion of the area that appears to be salable within not more than a forty to fifty-year period. It is important, however, that all of this work should not be completed at the inception of the development program. Enough area should be originally developed to give a good picture of the completed enterprise and be of sufficient size to conform with perhaps a ten-year sales program. This assumption is based upon a normal cemetery development of approximately 100 to 150 acres in a metropolitan area. Future development plans should contemplate the completion of salable sections to an extent that will reflect approximately enough area to be three to five years in advance of the actual market.

Family lots should be laid out and vary in size to allow for four to twelve possible burials; single graves should all be confined to definite sections, preferably along the borders of the cemetery; mausoleum lots should be specifically restricted to certain locations; and adequate space should be provided for general building improvements, roads and walks within the sections, lagoons, lakes, or parkways.

The appearance and consequently the general sales plan can be materially enhanced by developing two or three sections in the vicinity of the entrance gateways as parks and beauty spots. These sections should be so maintained for the first ten-year period, reserving the right to sell them, however, when and as parks in the outlying areas of the cemetery are completed.

Proper drainage should be provided, usually simple drain piping having sufficient gradient to allow for natural gravity flow terminating in a nearby body of water or municipal sewers. The engineer would determine the necessary depth, gradient, and size of system depending upon the topography of the individual parcel.

Hardy native grass that has been proven to be suitable for the soil and climatic conditions should be sown over the entire completed sections. This should be done in consultation with a competent landscape gardener. In the purchase of the land it is well to consult with an expert as to the possible necessity of fertilizing the soil or of adding top soil to the existing land. The trees should be studied and pruned with the development plan in mind and new trees of fairly large size should be planted in bare spots to conform with the broad landscaping plan. Roads may be of black top, asphalt, or gravel and should conform generally to the entire plan and character of the cemetery.

The entrance gateways, which provide the first visual picture of the development to the prospective purchaser, should be fairly elaborate and imposing in construction but under all circumstances should be dignified and appropriate, preferably of a monumental or semi-monumental type. Property enclosure fences should be substantial, enclose the entire property, and be so designed and constructed as to give the appearance of stability and permanence.

The sprinkling system within the cemetery should be permanent, and the amount of construction and size of the system should be determined in consultation with the landscape gardener and engineer. It

should be planned to furnish an adequate water supply at all times to eliminate the deterioration of lawns and shrubbery in periods of drought.

There has been a decided change in the types of receiving rooms and chapels built in the modern cemeteries. It is an increasing practice of families to have the complete funeral services at the chapel within the cemetery proper. This building may include the offices of the cemetery corporation, chapel and service rooms, rest rooms, receiving tombs, and storage vaults; it should be attractively designed, following a definite architectural motif conforming generally to the entrance gates and property enclosure fences. This type of building may vary in cost from $100,000 to $500,000 in the more modern cemeteries. The addition of a mausoleum section to the building will provide a lower total construction cost than would be the case were the mausoleum built as a separate unit and will save management fees throughout the life of the property since both units are handled from one office.

The character and extent of these improvements should be based upon a plan that allows for recovery of the capital investment in the first period of the cemetery's existence, as deferment over the life of the enterprise is unsound. The gross receipts during the sale of the first twenty-five per cent to forty per cent of the salable area should be sufficient to allow for complete amortization of the investment in improvements, together with amortization of the original cost of that portion of the land and land improvements actually sold, but regardless of the percentage it should all be recovered within the first twenty years.

This method of development and finance conserves the working capital of the management until such time as it is definitely required, consistent with the sales plan, and precludes the necessity of securing a return upon unproductive capital investment should the whole development be completed at once. This further automatically lowers the price at which the space can be sold or, inversely, increases the profits.

OUTLINE OF SALES AND PROMOTIONAL PROGRAM AS ESSENTIAL TO PROPER FINANCING AND PRESENTATION

It is at this point, if completed plans for the character and extent of the development have been formulated and adopted, that an analysis can be made of the gross receipts to be anticipated from the sale of the enterprise and the profit angle scrutinized as it affects the capital investment and valuation of the project as a whole.

The following analysis is of basic interest to both the developer and the appraiser:

The salable area should be determined after elimination of roads, walks, parks, building sites, etc., and the original cost of the land allocated to each lot upon a square foot basis.

Land improvement costs for the completed development should be determined and allocated to lots upon a square foot basis.

Building improvement costs, excluding the main mausoleum, should likewise be allocated to lots upon a square foot basis.

The cost of maintenance of the entire development should then be estimated upon an annual basis and this annual cost capitalized at a suitable rate, in the past perhaps three and one-half to four per cent, to provide a Perpetual Care Fund which will automatically produce sufficient income for this annual cost. Funds so provided are treated in a manner similar to any other trust funds.

Engineering, architectural, and survey fees should be allocated to the salable area upon a basis of cost per square foot, as should the management fees and interest during development and construction.

The sales cost should then be estimated, including overhead and administration, and likewise allocated to each square foot.

The summation of these costs will then provide a base from which the lot prices can be determined as a basis of recovery of capital, and additions made to allow for profit and deferments. The total should then be compared with the sales prices of competitive cemeteries in the community and further checked with the

relative unit prices in both new and old cemeteries in neighboring cities.

The mausoleum proper is to be differentiated from mausoleum lots—the former being a large monumental structure in which crypts are provided and sold for permanent burial space and for interment of ashes, while mausoleum lots are merely areas providing the owner with the right to erect a small one- to twelve-crypt tomb. The mausoleum proper is discussed in a separate section of this report.

The above data, if accurately analyzed and properly interpreted, will provide a base for formulating a definite sales program, which should include:

1. The establishment of prices that will allow for complete recovery of capital worked out to a square foot basis and varied upon the basis of the relative location and desirability of the respective lots.
2. The establishment of periodic increases in unit prices to provide for deferment of unrealized capital returns and/or higher profits as the enterprise nears completion.
3. The sale of Founders' Lots or Syndicate Holdings at lower prices than those established for individual lots in order to secure capital for development, with a definite restriction as to the time they can be placed on the market and the price at which they can be sold. This price should compare with the asking prices of the developers' lots, and arrangements can be made requiring the sale of these lots through the cemetery corporation's sales organization.
4. The publicizing of the sales program, including brochures outlining the sales plan, pictures or sketches of the improvements, and statements of the unit or per lot prices on the originally developed sections.
5. The establishment of the amount of the Perpetual Care Fund and the naming of a sound local bank or trust company as trustee.
6. Arrangements for sales of lots on a periodic payment plan, such payments, however, usually to be made in full at the time of the first burial.
7. The program of "calls" by the salesmen on prospective purchasers originating either by telephone or mail from the sales headquarters preferably located in a downtown section.

The development of the sales program, resulting in a tabulation of the expected sales by units and gross income by years and the determination of the economic life of the enterprise, becomes at this point the controlling factor in the justification of capital investment to the developer and the basis of valuation to the appraiser. The basic valuation factors are largely the same in principle to the appraiser whether the enterprise is in its initial stages or has a historical background of operations, the factors of risk and conservation of estimates being the variables as between the two conditions.

The cost of operation, cost of sales, reserves, depletion, etc. are readily ascertainable, and the problem then becomes one of determining the reasonableness of future gross sales, unit prices, and resulting annual income to be used as a base for estimating the value of the enterprise. The measure of the present worth of these annuities is largely a matter of judgment and experience as to the proper capitalization rate, and this rate is variable depending upon the soundness of the underlying property and plan, the demonstrated history of past performance, and the amount of area included in the program of disposal.

A holding having a definite sales record of say twenty years and a remaining life of twenty years, based upon a reasonably sound sales program and sales reception in the community and with a demonstrated chance of completing its sales program within that period, represents a sound investment and has ordinarily in other than the worst depression years indicated a reasonable rate of seven to eight per cent for the capitalization of the deferred annuities.

On the other hand, a new enterprise without a demonstrated sales reception in the community will require the application of a higher rate of capitalization, ranging as high as from twelve per cent to fifteen per cent. It is my opinion that projects reflecting a risk and hazard that

would require a higher rate than these can hardly be valued upon such basis and will in all probability develop a net worth somewhat less than the required invested capital in the enterprise.

DIGEST OF TYPICAL APPRAISAL

I have prepared, and am discussing hereinafter, a digest of an actual cemetery appraisal recently completed, setting out in narrative form the basic data applicable to the valuation of the property for the purpose of following through the computations and conclusions.

History of the Enterprise: The land area in total comprised 140 acres, of which 4,250,000 square feet were determined to be the salable area.

The cemetery had been operative for a period of four years at the date the appraisal was made. Up to that time a total of 1,400,000 square feet had been sold to the general public under an intensive sales campaign. In addition, a total of 875,000 square feet had been sold as Founders' Lots with the provision that these would be held by the original purchasers until six years after the date of organization of the enterprise. It was recognized that after this six-year period had expired the resale of these lots would affect the amount of gross sales of the cemetery association holdings, and agreements were drawn which provided for the disposal of these Founders' Lots by the cemetery association's sales organization in amounts of 100,000 square feet per annum. This agreement eliminated controversy as to the obvious advantage that the cemetery association would have in marketing their own lots rather than the Founders' Lots and further eliminated the possibility of having several sales organizations attempting to sell lots to the general public at varying unit prices.

The actual sales in square feet per year were developed from the records as follows:

	Cemetery Association Lot Sales (Round Figures) (In Sq. Ft.)	Founders' Lot Sales (In Sq. Ft.)	Total Sales (In Sq. Ft.)
1st year	(Preliminary development period—no sales)		
2nd year	250,000	400,000	650,000
3rd year	350,000	475,000	825,000
4th year	400,000	—	400,000
5th year	400,000	—	400,000
To date of appraisal	1,400,000	875,000	2,275,000

Analysis of Related Economics: The study and analysis of the sales plan and its basis of formulation became the next step in the investigation. It was found that the trading area in which lots had been sold in the previous four-year period comprised 850,000 people and 250,000 families. Investigation further disclosed that the burial permits in the county in which the property was located totaled 10,100 and the death rate 10,600 per annum.

There were three other competitive cemeteries in the area. One was nearly obsolete and had been practically sold out; one was of a poor type without perpetual care arrangements and had become disreputable and therefore hardly competitive in desirability; and the third was a most desirable cemetery steeped in tradition and well managed. The unit price averages in the latter, however, ranged from $2.00 to $2.50 per square foot, which were considerably higher than the property under review, and the experience of the cemetery being appraisd showed conclusively that the offering of cheaper lots in the community had been given a wide reception.

The relatively small salable area remaining when considered in the light of the very favorable sales of the first four years indicated that the entire disposal over a reasonable period of ten years might be readily anticipated, assuming, of course, the adoption of unit prices which would be consistent therewith. Prices would of ne-

cessity increase to cover accruing carrying charges, which in turn would tend to retard the rate of sales. On the other hand, the unit selling price at the date of appraisal was far below that in the only really legitimate competing cemetery. There was also the necessity of absorbing the Founders' Lots under the original agreement. Assuming a period of ten years, the future sales in square feet were tentatively projected as follows:

Year	Cemetery Association Lot Sales (In Sq. Ft.)	Founders' Lot Resales (In Sq. Ft.)	Total Sales (In Sq. Ft.)
1	350,000	—	350,000
2	325,000	—	325,000
3	200,000	100,000	300,000
4	200,000	100,000	300,000
5	200,000	100,000	300,000
6	200,000	100,000	300,000
7	150,000	100,000	250,000
8	150,000	100,000	250,000
9	100,000	150,000	250,000
10	100,000	125,000	225,000
Totals	1,975,000	875,000	2,850,000
Previous Open Sales—Exclusive of Founders' Lots			1,400,000
Total Salable Area as laid out			4,250,000

The foregoing computations showed a total of 2,850,000 square feet as the projected sales estimates for the next ten-year period. This develops an average of 285,000 square feet per year.

A study of the layout and section plan showed that the average lot contained an area of 120 square feet, and the above total of 285,000 square feet per annum indicates that 2,375 individual lots would be sold under this program each year. This further indicates that about one per cent of the total families were considered as potential purchasers in each year for the lots in this cemetery. It was further estimated that a total of 5,500 lot sales per year in the trading area was a reasonable expectation of sale for all cemeteries, based upon the previous five-year history of such sales for all cemeteries.

This estimate of total sales in the community of 5,500 units per year, it was assumed, might naturally decrease as the other cemeteries became obsolete, but even this total indicates that under a continuation of present sales programs one out of forty-five families would purchase lots each year for the succeeding ten-year period, which results in a total of twenty-two and one-half per cent of the families in the territory as purchasers of lots in this trading area in that time and ten per cent of these families as purchasers of lots in the property under review. When it is considered that this ten-year period reflects one-third of a generation and that therefore an addition of approximately 80,000 new families might be expected, it would appear that this estimate was conservative and reasonable of expectation.

CAPITAL INVESTMENT REQUIREMENTS AND INITIAL OPERATIONS

As has been previously stated, the first year was devoted to preliminary development, the sales campaign starting with the second year from inception. The original costs of the property (substantiated by the appraisal investigation), the Perpetual Care Fund, and the results of the initial year of operations were developed and recorded substantially as follows:

	Total	Per Sq. Ft. of Salable Area
Investment—Original Costs:	(4,250,000 sq. ft.)	
(1) Land	$ 150,000	$ .035
(2) Land Improvements	330,000	.078
(3) Buildings, Structures, and Equipment	225,000	.053
(4) Engineering, Architectural, and Other Professional Services	47,000	.011
(5) Promotion and Indirect Costs	85,000	.020
	$ 837,000	
(6) Perpetual Care Fund (Projected)	$ 850,000	.200

(7) Total Investment Requirements	$1,687,000		.397
Operations:			
(8) Basic Selling Price—First Year of Sales			.900
(9) Sales Cost:			
Commissions	15%		
Management	5%		
General Overhead (advertising, clerical, office rent, supplies, and miscellaneous	15%		
	35%	$ .315	
(10) Recovery of Capital and Perpetual Care—forwarded from (7)		.397	
(11) Total			.712
(12) Profit on sales			$ .188

Program of Unit Price Increases: Lots, therefore, which sold at an average price of ninety cents per square foot during the first year reflected a profit, before interest on capital, of about nineteen cents. The books disclosed increases in the average or base price for successive years to the date of appraisal as follows:

Year	Base Price Per Sq. Ft.
Initial	$ .90
2nd	$1.00
3rd	$1.15
4th	$1.15

With these data and cost estimates as a background, the problem resolved itself very largely into the estimating of the unit prices which would, first, effect the actual sale of the remaining salable area in a ten-year period and, second, produce the best possible returns. The carrying charges, of course, would have to be met. The appraiser's responsibility in making an intelligent valuation is to adopt and support a program that he feels probable of the highest realization. Unit prices that are too low would not only tend to reduce the selling period but also reduce the profits to be realized; if too high, the selling period would be extended and carrying charges would be increased, also reducing the profits. In perhaps no other field of valuation does the forecast of futures take on such great significance as in the valuation of cemeteries.

From a study of all related data the scale of basic or average unit prices was set up as follows for the disposal period of ten years.

Year	Unit Price Per Sq. Ft.
1	$1.25
2	1.35
3	1.45
4	1.50
5	1.55
6	1.60
7	1.65
8	1.70
9	1.75
10	1.80

Summarizing at this point, from the investigation the remaining life of ten years for the complete disposal of the salable area appeared reasonable of expectation. Furthermore, there was relatively small risk and hazard involved in such disposal since the cemetery development was not too large and did not extend over an excessive economic period, such as is often the case when land is platted for cemetery development in several hundred-acre parcels. Based upon the unit prices secured in other cemeteries in the community, it was determined that the expectation of increase, after the original four-year period, was also reasonable and conservative. It should be remembered that at this time, i.e., the date of appraisal, the cemetery was nearly completed and the ultimate cemetery development had taken definite shape.

Forecast of Income: The computation of gross profits from lot sales for the ten-year period upon this basis was, therefore, as follows:

Year	Estimated Lot Sales in Sq. Ft.	Unit Price	Total	Perpetual Care Fund 20c per Sq. Ft.	Sales Cost 35%	Anticipated Gross Profit*
1	350,000	$1.25	$437,500	$70,000	$153,125	$214,375
2	325,000	1.35	438,750	65,000	153,562	220,188
3	200,000	1.45	290,000	40,000	101,500	148,500
4	200,000	1.50	300,000	40,000	105,000	155,000
5	200,000	1.55	310,000	40,000	108,500	161,500
6	200,000	1.60	320,000	40,000	112,000	168,000
7	150,000	1.65	247,500	30,000	86,625	130,875
8	150,000	1.70	255,000	30,000	89,250	135,750
9	100,000	1.75	175,000	20,000	61,250	93,750
10	100,000	1.80	180,000	20,000	63,000	97,000

(*Note that the term "gross profit" includes automatically the recovery of invested capital in the land and other development.)

Valuation: The present worth of these gross profits or annuities over the next ten-year period was computed as follows:

Year	Gross Profit	Present Worth Factor @ 8%*	Present Worth
1	$214,375	.926	$198,512
2	220,188	.857	188,701
3	148,500	.794	117,909
4	155,000	.735	113,925
5	161,500	.681	109,982
6	168,000	.630	105,840
7	130,875	.583	76,300
8	135,750	.540	73,305
9	93,750	.500	46,875
10	97,000	.463	44,911
As of date of appraisal			$1,076,260

(*Factors from Inwood's Tables taken for this computation. For Federal Income Tax purposes the use of Hoskold's formulae is ordinarily specified or required.)

These present worth factors have been based upon a capitalization rate of eight per cent, which, following a careful investigation, was considered to be a fair estimate of the relative risk and hazard involved as compared with investments in other types of real property. The fair market value of this portion of the enterprise was accordingly determined to be $1,076,000. This gave no consideration to the mausoleum which was valued separately.

It will be noted that by this method there is no direct computation of interest, operating expenses, or other carrying charges required. The expense is all absorbed in the Perpetual Care Fund and sales cost.

The main mausoleum, which formed a part of the project, was completed at the end of the third year. In accordance with the sales agreements, construction was to be started after twenty-five per cent of the crypts had been sold from the plans. The cost of the mausoleum was $338,725, including all construction charges and engineering fees.

The structure is located close to the entrance of the property and adjoining the chapel and office building. It contains a total of 1,800 crypts of two main sizes—one size for regular entombments and one for cremation interment comprising small units. Of this total, 680 had been sold at the date of the appraisal, and the gross selling price of the remaining crypts, numbering 1,120, was established at $784,000. The cost of sales was estimated at twenty-five per cent, or $196,000, and the Perpetual Care Fund at fifteen per cent, or $117,600, in accordance with the sales agreement, leaving a gross profit of $470,400. The sales in the first years were $340,000, or about thirty per cent of the total, and it was estimated that the balance of the sales would in all probability be spread over the remaining ten years in relatively equal amounts or at the rate of $78,400 per annum.

This annuity of $78,400 per annum, less the cost of sales and the Perpetual Care Fund which together total forty per cent, provides an apparent net profit of $47,040 per annum.

The present worth of $47,040 per annum for ten years, capitalized at eight per cent, is $315,638.

The attached business value in the mausoleum, as represented by this total, reflects a contributory increment brought about from its relationship to the cemetery as an entirety. It is not confined to the value of the specific site and structure.

The value of the whole enterprise, therefore, was established as follows:

Cemetery Proper	$1,076,000
Mausoleum	315,000
Total	$1,391,000

Status of the Owner-Capital: Reviewing the accounts of the operating company at the date of the appraisal five years after its inception, the following tabulation of Gross Income, Capital Investment, Sales Expense, and Perpetual Care shows the status of the project to the owners at that time.

DISBURSEMENTS

Year	Source	Capital	Expense or Reserve	Gross Income	Gross Profits
1st	Cost of Development	$837,000*	—	—	
2nd	Founders' Lots		—	$ 280,000	
	Perpetual Care Fund		$ 80,000	—	
	Sales Costs		98,000	—	
	Lot Sales		—	225,000	
	Perpetual Care Fund		50,000	—	
	Sales Costs		87,500	—	
			$ 315,500	$ 505,000	$ 189,500
3rd	Mausoleum	338,725*	—	—	
	Mausoleum Sales		—	$ 200,000	
	Perpetual Care Fund		$ 30,000	—	
	Sales Costs		50,000	—	
	Founders' Lots		—	331,500	
	Perpetual Care Fund		95,000	—	
	Sales Costs		116,025	—	
	Lot Sales		—	350,000	
	Perpetual Care Fund		70,000	—	
	Sales Costs		122,500	—	
			$ 483,525	$ 881,500	$ 397,975
4th	Mausoleum Sales		—	$ 140,000	
	Perpetual Care Fund		$ 21,000	—	
	Sales Costs		35,000	—	
	Lot Sales		—	460,000	
	Perpetual Care Fund		80,000	—	
	Sales Costs		161,000	—	
			$ 297,000	$ 600,000	$ 303,000
5th	Mausoleum Sales		—	$ 78,400	
	Perpetual Care Fund		$ 11,760	—	
	Sales Costs		19,600	—	
	Lot Sales		—	460,000	
	Perpetual Care Fund		80,000	—	
	Sales Costs		161,000	—	
		$1,175,725	$ 272,360	$ 538,400	$ 266,040
					$1,156,515

*Indicates capital outlay for year.

The development company, therefore, actually had $837,000 invested for a period of four and one-half years (an average of one-half year during the first year of development) and $338,725 for two and one-half years. These totals with accrued interest at eight per cent indicated a total gross investment by the company at the date of appraisal to be about $1,600,000.

This is the total sum the company would have had on hand if they had invested their monies in other types of investments producing a return of eight per cent. The worth of the annuities which had actually accrued to the company during the first five-year period is as follows:

Year	Amount		Present Worth Factor 8%	Total
1st	none			
2nd	$189,500 x 3 yrs.	=	1.2597	$238,713
3rd	397,975 x 2 yrs.	=	1.1664	464,198
4th	303,000 x 1 yr.	=	1.0800	327,240
5th	266,040		1.0000	266,040
				$1,296,191

Upon a basis of comparison as between the two alternatives of investment the company was actually "out of pocket" at the date of appraisal the difference between the two totals, or about $304,000. This is a matter of interest primarily in the outlining of a future financial program or for income tax and other purposes and is not significant in a current appraisal.

In compensation for this "out of pocket" investment, the company has established through its successful promotion and management a value for the whole enterprise estimated at $1,391.000. The difference between these two totals is $1,087.000. This sum of $1,087,000, therefore, represents the attached business value that was existent in the cemetery at the date of the appraisal.

It represents a capital increment of almost one hundred per cent on the original investment of $1,175,725.

If allocated to land only, for comparison purposes, it represents an increase in the unit price from $1,070 per acre to $7,800 per acre under an intensive and successful development and management plan.

This resulting value is not an unusually high increment for a promotional venture when it is noted that the related economics pertinent to the community and the development proper were so unusually favorable that after the four-year period of promotion and development, and the demonstrated market for the sale of units, the rate for valuation purposes was established at eight per cent. The risk and hazard had been considerably decreased, and the difference in the rates of, say, twelve per cent (as might have been applied at the inception) and eight per cent, respectively, actually reflect the successful management and establishment of the enterprise (the former being a rate applicable to a promotional venture in its "on paper" stage and the latter being the rate applicable to an established "going business").

This enterprise was perhaps unusual in that it included only a fourteen-year total sales program as compared with normal sales programs of cemeteries ranging from twenty to forty years.

The community economic situation was ideal for a development of this sort. There was only one real competitive cemetery, and its management was not aggressive and showed no particular ability to market the property successfully. In addition, the community had a wide trading area—had not been approached before as to the purchase of cemetery lots upon a direct sales method basis—and happened to be in an enviable financial position as to the total wealth and income per capita.

The prevailing current rates of return on investments generally indicate that investments returning more than four per cent safely are rather difficult to find and that while additional risks accrue to capital in enterprises of this character, they can be made to pay a handsome return if they are well conceived and economically sound.

Certain other profits may be derived from services performed, such as grave excavation, composting of top soil, monument erection, sale of concrete vaults, rental of chapel, etc. These profits are involved and complicated as to allocation between maintenance and services, inasmuch as the same labor is generally used for both. If it has been demonstrated that over a period of operating years this type of additional profit can be reasonably measured, it also becomes a part of the company's income and may be considered in the appraisal of the whole enterprise as a going concern.

The discussion of this actual report, as set out herein, covers only the highlights in the appraisal itself. The economic discussion has been brief, and the mechanics of determining the costs of operation and development have not been covered in detail.

It is planned in a succeeding article to present in more detail an actual appraisal report on a cemetery development which was originated in 1894 and valued as of March 1, 1913, as a base for depletion for income tax purposes and for the establishment of an adequate Perpetual Care Fund based upon labor and material prices as of that date.

Appraising the Small Home

By DAVID NEISWANGER, M.A.I.

THE appraisal of residential property, more particularly the small, single-family home, may present fewer problems of a highly specialized and technical nature than are confronted in the valuation of large income, business, and industrial projects, but no other type of real estate, in my opinion, requires a broader knowledge of the fundamentals of appraising or a higher degree of experience and judgment in the application thereof.

Furthermore, because of the importance of home ownership in our social and economic life, because of the fact that the great bulk, numerically, of real estate transactions involve residential property, both with respect to selling and financing, and because practically all of us, whether we be brokers, property managers, mortgage men, or appraisers, have some contact with the single-family home, it is evident that this particular field of appraisal is of prime interest and importance.

Last year, I am told, over 2,500,000 appraisals were made in the United States for the purpose of valuing residential real estate for loan purposes. Add to that number all of the appraisals required by individual and corporate clients, public authorities, and others in connection with the taxing, liquidation, sale, or purchase of residential property, and we aggregate a staggering total. Some of these appraisals, no doubt, were made by the man who "knew the property so well he didn't even need to inspect it,"—a few, by the man who merely "drove by." The great majority, I dare say, were appraised by men who made an actual study of the property and the factors affecting its value. This opinion is supported by the knowledge that the governmental agencies and great private lending institutions have developed forms and methods of appraisal procedure which safeguard against superficial consideration of pertinent data, and the appraiser with an eye to the future should recognize and welcome the fact that the day of horseback "guestimation" is gone.

The word "appraisal" means a process or method by which is derived an opinion of the value of a property. As appraisers, we must indicate the method used, relate it to the subject property, and justify the reasonableness of our conclusion.

THE PURPOSE OF AN APPRAISAL

It is important at the outset, in my judgment, to ascertain the purpose of an appraisal. I am aware of the fact that some qualified appraisers contend that since value is the price which represents the present worth of all the rights to future benefits arising from ownership, the purpose of the appraisal is immaterial. However, in the light of the confusion that has existed as to terminology and the many adjective prefixes that have been attached to value, it is important that the client and the appraiser have a mutual understanding as to just what the objective of the appraisal is.

THE DATA PROGRAM

We have heard a great deal about the data program, that is, the pertinent information bearing on the subject property. A vast number of facts may be included. In the appraisal of homes, general data covering the city and surrounding territory must be considered — natural resources; growth; population trends; type and history of the industries; the nature of citizenship; cultural, recreational, and social activities influencing the satisfaction of home ownership; tax levels; and other factors which provide a basis for

conclusion as to the economic stability and prospects of the community.

Even more intensive must be the study of the immediate neighborhood—its age and extent of development; utilities and public conveniences; the character and condition of the improvements; degree of conformity and the trend of utilization; zoning, deed restrictions, and neighborhood protection; amenities in the neighborhood; accessibility and conveniences of transportation; vocational classification and economic status of the residents; percentage of tenant to owner occupancy and the trend; characteristics and background of the residents of the neighborhood; presence or threat of intrusion of discordant racial groups; and other conditions having a bearing on the present and future desirability of the location.

Although these conditions outside the property itself have a greater influence on its value than the inherent characteristics, building improvement data must be recorded in detail.

First impressions are important; hence, architectural type and suitability are noted. Specialized arrangement, the use of untested material, or originality of design that borders on the "faddish" should be a red flag to the appraiser.

The room layout, sufficiency of closet space, placement of openings, and similar considerations have a positive bearing on the value estimate, irrespective of reproduction costs.

Many appraisers feel that an inspection of the basement gives the best index as to the quality and character of a house. Foundation and first floor structural factors are obviously important, but a thorough examination of the building, inside and out, must be made. The residence must be measured for reproduction cost computations, and the kind and quality of materials, modern conveniences, and mechanical equipment must be recorded. The garage, if detached, special buildings, driveways, and landscaping are valued separately from the lot and the house in a summation appraisal.

There is yet another type of required information, certainly the most widely invoked and possibly the most pertinent in the appraising of small homes, that is, evidences of value in the neighborhood. The evidences of value data are utilized in the comparative approach in the appraisal process. In collecting such information, the appraiser secures a record of sales of comparable property in the neighborhood, offers that have been made, asking prices, and the opinions of people who are considered to be qualified as to property valuation. The appraiser's own reports on residences that will qualify for consideration are helpful. Every appraiser knows that such information requires very careful analysis; a great deal of such material, even when given in good faith, is inaccurate. The circumstances surrounding sales, offers, and listings must be considered, and an equalizing factor employed. Furthermore, it is important that there be some legitimate grounds for comparison. Properties in the same general location may be subject to entirely different influences and prospects as to value. Obviously, the time of the transaction is vital. A similar comparative procedure should be followed with respect to rental or income information.

Fortified by the rather inclusive data program suggested, the appraiser is prepared to marshal facts back of the primary approach that he may conclude to take toward determining the answer to the valuation problem.

For example, we are called upon to appraise a comparatively new home, a balanced improvement built at a suitable time with respect to market price levels and demand, well and suitably located in a neighborhood with high amenity values. Our first reaction is to consider the reproduction cost of the improvements and the fair value of the ground, it being evident from

all conditions that the value of the property should approximate its cost. We are considering the value of another property located in a colorless but respectable neighborhood—a six-room, box-shaped structure—serviceable, to be sure, but built during the unimaginative period of residential architecture. Possibly, we think of the Jones house in the same block that was sold last month at a known price, of the Smith house across the street that is offered for sale, and by a process of comparison properly developed secure a lead to the tentative value estimate. Finally, we consider a house that is merely a place to live, totally lacking in home amenities, and obviously earmarked by its character and surroundings as a property that would be purchased or held under an ownership to produce rentals. In a situation of this sort, the logical first reaction would be a capitalization of the rents, that is, a consideration of the probable income, the fixed and special charges, and the resulting net rent that may be expected for an estimated number of years to come resolved into a capital sum or estimated value.

Although lines of demarcation are not commonly drawn as sharply as suggested, this simple illustration calls to mind the fact that the nature of the property itself and conditions environing it suggest almost automatically to the trained residential appraiser the primary approach to be followed, the nature and scope of data required, and the relative emphasis that should be placed upon all of the factors in the situation.

COMPARATIVE APPROACH

The comparative approach heretofore referred to is more widely used and more properly stressed than any other in considering the middle-class, general run of residential property. Until recently a good many residential appraisers depended upon the comparative approach exclusively, upon the assumption that several sales, which, in their judgment, were properly comparable, established an adequate measure of value. Sales do, at the least, indicate the appraisal that some one made as to the value of the property and actually backed up with the expenditure of his own money, because a purchaser may be said to have made an appraisal of a property, subject to the background of his own knowledge of values and other factors, when he makes a purchase. It should not be contemplated that this method can be used casually, however, because comparisons, to be safe and effective, should extend into replacement costs, rentals, and other aspects of the data program.

REPRODUCTION COST APPROACH

We have all had striking evidence of the fact that cost may be far from synonymous with value, whether in residential property or other types, even when the improvements are new. On the other hand, it is obvious that some one believed that the value of a new home, for example, would be as great as the cost, otherwise it would never have been constructed. Residential appraisers should consider the reproduction cost, but the importance or validity of the information is obviously dependent upon a good many factors. If we are appraising a new house, built in a "good town," ideally located, properly planned, and constructed at a time when a need existed for the improvement, the cost estimation process is obviously a first consideration. On the other hand, if the property is older, if both functional and economic depreciation have taken heavy toll, if the improvement is misplaced, or if any one of a number of other conditions prevails, the reproduction cost of the property does not help much, because it has to be adjusted by the introduction of a number of factors which are pretty much dependent upon the knowledge and judgment of the appraisers.

In following the reproduction cost route to the value estimate, we have to determine the value of the ground, using the procedure outlined in the discussion of the

comparative appraisal method. The estimated cost of the improvements must be reliable and consistent with the current material and labor market conditions. It may be based upon actual bids, quantitative estimates, or upon the square foot or cubic foot "comparative cost" if available and the appraiser is familiar with such empirical data.

After we have found what we believe to be the fair reproduction cost of the residence new, using floor plans and specifications, if available, we are confronted with the necessity of considering deterioration and obsolescence. For practical purposes, a residential appraiser can group, under his deterioration consideration, the loss of physical value because of the effect of age and, in addition to that, the cost of impending maintenance requirements.

Under the head of obsolescence should be computed those conditions inside and outside the property that limit its value; unattractive appearance and poor design, inadequate or excessive construction, clumsy arrangement, undesirable neighborhood conditions, unsuitability to the site or neighborhood, and all factors which decrease the benefits that can be expected in the future from ownership of the property. The final value estimate results from the addition of the ground value, the reproduction cost of the property less deductions for depreciation of all types, and the value of the garage and other features.

The definition of value involves a consideration of future benefits. We are, therefore, interested in the effective age of the property rather than its actual age. We must not forget, as residential appraisers, that the physical life of a residence is likely to outrun the suitability of its location and that more weight, in all probability, will have to be placed upon the probable shift in neighborhood conditions than upon the wearing out of the property itself in estimating the anticipated useful life.

Occasionally, due to a transition brought about by the passing of time or other means—possibly new development, rezoning, changed traffic-ways—the utility of a location apparently shifts from residential to business. This opens a new appraisal problem. Oftentimes the resulting net value benefits are more largely anticipated than actual.

INCOME-CAPITALIZATION APPROACH

The word "amenities" looms large in connection with the value of residential property. Amenities are defined as influences, either natural or artificial, which add to the pleasure of living. We have all found that when we attempt to compute the rental value of a residence and charge against such income all of the fixed and special costs of ownership, what might be called net income is surprisingly low and the capitalization of that income indicates a lesser value in practically all cases than can properly be assigned to the property. Inasmuch as many residences are rented, the owners must compute their benefits upon an income basis without regard to the so-called amenities, excepting as they are reflected in the rental level. The relation between rental income and value does not function regularly with reference to the finer homes, but in the small homes field, which we are discussing, house purchasers for income frequently have a standard formula which may be applied, and, while loose and frequently undependable, it reflects one method of estimating value. For example, in my own community, buyers in the moderate price bracket have come to feel that an ordinary residence property should be worth, as a rule-of-thumb, about $100 for each dollar of gross monthly rental. This formula contrivance is weak in that the anticipated duration of the income stream is of major importance as well as the amount and that net income is the important gauge for value computation rather than gross.

The fact that approximately one-half of the homes the country over are tenant occupied and the knowledge that, while

houses may be built for homes, it is seldom that a small residence is not diverted to income purposes during its lifetime, offer additional evidence of the appropriateness and importance of the income-capitalization approach. Frequently, it is a sufficient check, in valuing small homes, to take cognizance of the net rent as indicated by the appraisal, choose an appropriate rate of capitalization, and compute a value. The use of the property residual or of the declining annuities approach has many exponents where emphasis is placed upon the capitalization estimate of value.

SUMMARY

After the appraiser has gathered the data and information which will enable him to judge the stability and future prospects of the community, the character and trend of the neighborhood, the conditions inherent in the property itself, as well as all of the details needed in order that the property may be compared with others, that its reproduction costs may be ascertained, and that its income possibilities may be considered, he is ready to determine the value estimate. If he can interpret the facts that he has gathered and he has experience and sound judgment, the result should be fair and reasonable. He will probably find himself confronted with three suggestions arising from the appraisal exploration. This does not imply that there are three different values but merely that the appraiser must evaluate the appropriateness and relative importance of information developed from the three different approaches.

The replacement cost result will no doubt indicate the maximum value that can reasonably be considered. Contrasted with that estimate is the appraiser's result by capitalization, reflecting what a landlord type of investor would consider the property to be worth disregarding amenity appeal. The estimate by comparison will be found, almost uniformly, somewhere between these two extremes. If the home is well located, inherently desirable, and of high amenity appeal, the comparative value will approach the replacement value. If the opposite condition exists, comparative levels will taper off toward the capitalized value.

After we are all through, we should ask ourselves whether our procedure and our answer are reasonable and satisfying. If they do not "make sense" in the light of our own experience and judgment, careful back-tracking over the problem is in order. No appraisal is finished until the appraiser is satisfied with the final estimate.

CONCLUSION

Several general considerations come to mind in conclusion. Many appraisers who are intimately acquainted with their field of activity have "the feel" of various districts which enables them to translate the sum total of their accumulated information about a particular locality without the painstaking routine which has been outlined in connection with the community and neighborhood program. It is safe to say, however, that if such appraisers were to analyze the elements that make up the whole of their reaction or attitude toward a particular neighborhood or district, they would find that the specific factors which have been outlined herein have all had their part in making up the aggregate result. While a background of long and intelligent acquaintance is valuable, there is danger that attitudes or opinions may become too definite and too inflexible; the character and environment of communities and neighborhoods are constantly shifting, and the appraiser who is on the lookout for such transitions and can see them in the process and not after the accomplishment is worthy of the name.

I wish to stress the importance of keeping complete files covering information pertinent to appraisal work. The records of sales, offers, and asking prices obtained regularly from brokerage offices or elsewhere with full information involving the details catalogued by streets, additions, or districts as it accumulates will become al-

most invaluable with the passing of time. Cost data should also be collected on various types of residential construction with a breakdown in some detail—preferably the cost of residences currently built in the community—as a guide to the reproduction cost appraisal computation. Appraisal forms, utilized by governmental and private lending agencies and corporate ownerships, should be collected and studied. No appraisal, even of an inexpensive home, should be undertaken without the use of an adequate check sheet or questionnaire which, when completed, not only constitutes a record of the work and adds information for your files but also serves as a safeguard against shortcuts that might be detrimental to the quality of the work. Use one of the younger men in your office to assist in measurements, computations, transcribing of information, and the building up of the files.

One of the problems that confronts the appraiser of small homes is as to whether appropriate fees will be paid for a thorough and workman-like appraisal such as has been outlined herein. My own belief is that appraisal charges in this property classification can be increased to the satisfaction of all concerned if the principal finds that he is receiving something for his money—and that is up to the appraiser. A letter-report, merely setting forth an amount, without information or substantiation, is of limited value.

We can profitably adapt to appraising some of the aspects of volume production. I do not mean that any residence can be considered upon other than an individualized basis, but if we continually collect and organize full information covering all of the ramifications of the data program for our appraisal territory, that information will be just as pertinent and just as valuable to clients, if utilized repeatedly, as would be the case were we obliged to build it up in each instance from the beginning.

Finally, the only policy for an appraiser to pursue, who has a proper conception of his responsibility and a desire to enhance the prestige and standing of the rapidly emerging appraisal profession, is to accept no assignment that he is not prepared to do conscientiously and well.

Court Testimony

By GEORGE L. SCHMUTZ, M.A.I.

AN expert witness is one who is possessed of peculiar knowledge and experience which are not common to people generally and who may have an opinion which is based upon such peculiar knowledge and experience for the purpose of assisting the court, or jury, in the determination of an issue, such as in expropriation proceedings, the amount of damage sustained, measured in terms of dollars.

It is the general rule that lay witnesses (non-experts) are restricted to the giving of testimony regarding facts; but experts are permitted to express opinions and conclusions which are based upon facts. Therefore, the latitude allowed an expert is much broader than that permitted a non-expert in so far as the scope of the testimony is concerned.

As a class, the expert on value now met in the courts is of recent origin. The training of men for this particular purpose is comparatively new, although for centuries the courts have called upon persons possessed of specialized knowledge to render expert opinions on matters of litigation.

The judge or the jury *determines* value from a legal standpoint; the appraiser *estimates* value. Thus, value is a *fact* found by the court and only an *opinion* expressed by an appraiser. An opinion is a belief which is stronger than an impression but not as strong as positive knowledge; it is a conviction founded upon probable evidence.

Because of its very nature, an opinion is not susceptible of definite proof, and this condition makes possible wide differences of opinion of the value of property. Variations may be accounted for in either or both of two ways, (1) due to a diversity in the interpretation of the data from which the opinion is derived and (2) because of bias and prejudice or outright dishonesty of opinion.

Unfortunately, the employment of expert appraisers to testify in the courts has usually been at the instance of the parties litigant rather than at the instance of the court, and too frequently such testimony is colored with bias toward the employer—the one who pays the fee. In fact, the abuse has been so great that the expert real estate appraiser has been looked upon with disfavor—and with reason. In some situations it has become common knowledge that expert testimony can be purchased to support any contention. It is hardly too strong to state that the prostitution of professional integrity runs rampant in the courts today.

In valuation cases "experts" are frequently found who will testify to sworn beliefs and opinions that they know are not true. They do so for the fee paid them, feeling safe because the perjury cannot be proven. Of course, it follows that when the testimony is at utter variance with reasonableness, either the opinion is dishonest or the appraiser is incompetent. No other alternative can account for this condition. This situation makes it that much more difficult for the honest, capable, and conscientious appraiser.

In theory, though not always in fact, the expert witness is a person of authoritative knowledge who takes an unbiased position. The very nature of this position and his oath to tell the truth require that his testimony shall be full and honest, irrespective of which litigant it may help or hurt. His position is presumed to be the same as though he had been appointed by the court,

to testify for the court, and was to receive his fee from some general public fund, or equally apportioned against the parties litigant.

Unfortunately, this is not always the practice. Too often the appraiser is not employed unless the employer knows that the appraiser will testify to the figure desired by the employer. It may be a condition precedent to the employment. Many appraisers will stretch their imagination to the elastic limit and conjure up nebulous theories in the attempt to support a predetermined opinion in order to get the job.

It is only natural that some of the leading jurists have remarked that expert testimony is a disgrace to everyone concerned—to the court, to the person who gives it, and to the profession he represents. This, of course, applies throughout the broad field of experts—the appraiser, the physician, and all others having specialized knowledge who testify in the courts. Nor is the odium confined to the witness. In numerous cases the testimony to be perjured by the expert is manufactured by the attorney. He makes the bullets; the expert shoots them. Then, too, in matters involving value and damages, particularly condemnation and tax appeal cases, the attorney will take the case upon a contingent basis. This is a basis wherein his fee is based upon the verdict—the higher the verdict, the higher the fee. Appraisers, too, are ofttimes employed upon the same basis, either by the attorney or by the property owner. It is this condition, personal interest and personal greed, which accounts for much of the unconscionably unreasonable testimony in the courts. Aside from the existence of shyster lawyers, perhaps the worst feature of the present system is the existence of charlatans who pose as experts on value yet know nothing of it. Such quacks in the legal and appraisal fraternities have brought both professions into well-earned disrepute. The American Institute of Real Estate Appraisers is doing much to correct such evils. It is a worthwhile endeavor.

PREPARATION OF THE CASE

Preparation is ninety per cent of any case. A case well prepared is a case half won before going to trial. Nothing can be so damaging as a case poorly prepared with the evidence and testimony slovenly presented. From the appraiser's standpoint, the field of preparation may be divided into two parts, (1) the things done preparatory to going on the stand and (2) the exhibits prepared to illustrate and support the testimony.

The task of the expert appraiser on the witness stand is a task of salesmanship. He has an opinion to sell—an opinion of value which he seeks to have the court or jury accept. Thus, certain principles of salesmanship proven effective in selling real estate or commodities are found to be equally effective in selling ideas and opinions, i.e., getting the court or jury to accept his views.

An old proverb, which probably antedates Christianity, says, "One picture is worth ten thousand words." Probably out of this proverb grew ideas of visual selling—selling through the eye rather than the ear. A survey conducted for the National Association of Real Estate Boards some years ago indicated that probably eighty-seven per cent of the sale was effected through the eye, about seven per cent through the ear, and the remaining six per cent through the other senses. The point here made is what a person *sees* is of greater consequence than what he *hears*—thus, the great importance in presenting testimony through the eye.

In court cases where value is the issue, such as "just compensation," the visual approach is a matter of no mean weight. This is accomplished by means of maps, charts, and photographs and, where practicable, by means of computations and

sketches made on a blackboard. Experienced salesmen realize that many sales are made through the point of the pencil—figuring done in the presence of the prospect. Experienced appraisers also employ the same technique—selling their idea of value through the end of a piece of chalk on the court blackboard, where the court or jury can see the computations made and the estimates of values developed.

One of the most effective ways of supporting an opinion of the value of a parcel of land is for the witness to go to a map of the district, which has been introduced into evidence and tacked on the blackboard, and thereupon mark, with colored pencil, the various nearby parcels that had been sold or were listed for sale. Indicating them on a map for presentation through the eye is much more effective than merely talking about them.

In preparing to testify in court, the appraiser will seek information pertinent to the question at issue. In this investigation he will interview many people—owners, tenants, lessees, real estate brokers, and others. Because of the human limitations of the memory, it is advisable to record the information for the purpose of refreshing the memory when occasion requires. Some cases do not come to trial for months or even years after the appraisal is made. And, in some cases, the number of interviews may be so numerous that the witness could not be expected to remember in detail just what was said and when and where.

The writer is reminded of one case in which the issue did not come to trial until two years after the investigation and appraisal had been made. During the cross-examination the witness reported a conversation with a lessee which startled the court, and the witness was asked if he had any notes in his records to show just exactly what the lessee had said, some two years before. The witness had a two-page typed record of the interview, which was then read into the record. The failure to support the statement with notes made at the time would have been damaging indeed.

In the preparation of a case the appraiser must make inquiry into all matters which may have a bearing upon the issue. In fact, he must frequently go further and delve into irrelevant matters so as to be able to say, upon cross-examination, that he did consider them, when the adverse counsel may be attempting to reduce the value of his testimony by asking a series of questions to which he must reply in the negative.

ASSISTANCE TO THE ATTORNEY

The expert appraiser can be of great assistance to the attorney who is to try the case. This is true in so far as the technical aspects are concerned, such as the data gathered and upon which the value conclusion is based, including the maps and photographs to be offered in evidence, as to size, scale, and data to be shown thereon.

Not only can the appraiser be of invaluable assistance to counsel from the technical angle but he may be of great help in certain legal phases as well. There are relatively few attorneys in any one locality who have ever tried a case in condemnation. The vast majority of them, including most city attorneys of small communities, are woefully deficient in a knowledge of the law relating to this subject.

Few attorneys understand the procedure, how to elicit the testimony the appraiser is ready to give, how to cross-examine an adverse witness, the meaning of market value, the date as of which the damages are deemed to have accrued, the measure of compensation, the law pertaining to valuations of separate portions of the property, the value to either party, the effect of sales and absences of sales, the relevancy of the county assessor's valuation for tax purposes, damages to business, severance damages, consequential dam-

ages, to what a witness may and may not testify in his direct-examination, and other matters of importance.

The competent appraiser is as fully informed in this regard as the best informed attorney. Therefore, he can be of assistance to counsel in the preparation and even in the conduct of the case. "To be forewarned is to be forearmed"; therefore, careful preparation is a matter of imperative necessity.

ATTITUDE OF THE WITNESS

The value of the testimony of an expert witness depends upon the degree to which the testimony is accepted by the court, or the jury. Technical testimony is uninteresting, particularly in condemnation cases. People are not interested in things they do not understand, and testimony involving mathematical computations of damages or similar matters is so little understood by judges and juries that verdicts are commonly based upon matters other than that which the testimony adduced.

Many a decision is predicated upon the appearance or attitude of a witness rather than what he said. For this reason, psychology enters as an important consideration in the presentation of court testimony, usually for the good and sufficient reason that the jury does not understand what it heard, particularly after the attorneys have so restricted the testimony as to keep the facts obscured and have befuddled those matters which were developed in the course of the trial.

Impressions which the expert registers through the eyes of the jury may have greater weight than the impressions recorded through the ear. Therefore, the appearance and the attitude of a witness may be the influencing factors affecting the verdict.

In order that the testimony of a witness may gain the maximum of acceptance, that is, have the jury believe him, the witness should:

1. Present a favorable personal appearance.
2. Be openly frank and truthful.
3. Give honest, sincere, and competent answers.
4. Speak distinctly and loud enough to be heard.
5. Assume a comfortable and relaxed position in the witness chair.
6. Face the court or jury when answering questions.
7. Be courteous and respectful at all times.
8. Readily admit the obvious.
9. Readily admit errors or lack of information.
10. Not volunteer information.
11. Not answer a question unless he understands it from the viewpoint of the questioner.
12. Memorize as much data as possible.
13. Make use of the blackboard to illustrate ideas or computations when possible.
14. Convey the impression of being neutral, i.e., interested in the truth rather than the contentions of either party litigant.

In some cases the testimony is of such a complex nature that it is difficult to explain in a clear and concise way. It is held by many that accuracy may be sacrificed for clarity in the explanation of the matter at hand. It is much better to explain a condition or a computation in a less precise vein if by so doing it becomes more easily understood by the jury and further provided that justice is not subverted thereby.

DIRECT EXAMINATION

The expert witness, an appraiser for example, takes the stand for the purpose of stating his opinion of value or damages. Before being seated he is sworn to tell the truth, the whole truth, and nothing but the truth. Then the attorney who called him asks a series of questions for the purpose of "building him up," through his answers, as a qualified expert. In a simple case, after having shown the peculiar fitness of the witness, he is asked other questions concerning his appraisal, and then he is finally asked his opinion of value. This concludes the direct-examination, and the witness is released to the opposing counsel for cross-examination.

Briefly, the direct examination may consist of only four questions. This may be all that is necessary to permit an experienced expert fully to give his direct testimony. The questions are:

1. What is your occupation, where is your place of business, and tell the court of your experience as an appraiser?
2. Before forming an opinion of value (or damages), what did you **do**?
3. Before forming an opinion of value (or damages), what matters did you **consider**?
4. By reason of your investigation and by virtue of your experience, what in your opinion was the market value of the property in question on March 1, 1937 (if that were the date)?

The opinion of an expert is no better than the reasons upon which the opinion is based. In a condemnation case, where value is the issue to be determined, the witness must seek to disclose to the court not only his naked opinion of value but also the reasoning from which the opinion emerged.

If, in his direct-examination, the witness does not take advantage of the openings afforded him to explain to the court, or jury, the reasoning by which his opinion of value (or damages) was formulated, then the witness may be of but little value to the case.

Here the question arises—just how much of the theory of an expert witness may be introduced into evidence upon his direct-examination? In the early case of *Central Pacific Railroad Company vs. Pearson, 35 California,* at page 262, the Supreme Court laid down the rule as follows:

". . . . . they cannot, upon the direct-examination, be allowed to testify as to particular transactions, such as sales of adjoining lands, ... notwithstanding these transactions may constitute the source of their knowledge. If this was allowed, the other side would have the right to controvert each transaction instanced by the witness . . . . which would lead to as many side issues as transactions and render the investigation interminable."

It is significant that this rule, reiterated in subsequent decisions, is stated in the negative form, i.e., by a declaration of what cannot be proved upon direct-examination. However, in the case *Spring Valley Water Works vs. Drinkhouse, 92 California,* at page 528, there appears the first intimation of what may be proved upon direct-examination. In the concurring opinion of Mr. Justice Harrison appears the following declaration:

". . . . it is also proper that after he has given his opinion, he be allowed to give the basis upon which it has been formed, or the elements out of which it is composed . . . . the capacity of the expert is generally tested upon cross-examination, but it is equally competent for the party calling him to support his opinion after he has given it, by having him give the details upon which it is based. (Keith v. Lothrop, 10 Cush. 457; Dickenson v. Fitchburg, 13 Gray, 557; Hawkins v. Fall River, 119 Mass. 94.)"

An analysis of this language discloses that, upon direct-examination, the witness will be allowed to testify:

1. As to his general qualifications as an expert.
2. As to his familiarity and knowledge of the particular locality.
3. As to the elements which enter into the make-up of the market value of the property in question.
4. As to **the basis upon which his opinion has been formed** or the elements out of which it is composed.

The affirmative view is further elucidated in the *Estate of Ross, 171 California,* at pages 66 and 67:

". . . . The party calling a witness to give his opinion on value may qualify him by showing . . . his familiarity with the state of the market and with sales of similar property in the vicinity, and any other facts tending to show his knowledge of the subject and capacity to give an opinion thereon. But, while he knows of sales made and of the prices obtained . . . . the prices given in any particular instance are not admissible, except as stated, on the cross-examination of the opposing party, if he sees fit to make the inquiry."

Therefore, on direct-examination, the witness may discuss in detail the sales he discovered but he cannot mention the prices paid.

In a hypothetical case the testimony might run as follows:

Question No. 1: "Mr. Witness, what is your occupation, where is your place of business, and

tell the court (or jury) of your experience as an appraiser?"

Answer: "I am a licensed real estate broker and an appraiser. My office is at 121 West Fifth Street and has been at that location for the past ten years. I have been engaged in the business of acting as a real estate broker, negotiating sales and leases, making appraisals of real estate, and testifying in courts as an expert on value in this county during the past twenty years. My appraisal experience includes the following appraisals: (state various properties appraised). My court experience includes testimony on value in the following cases: (state cases wherein testimony was given). Some of the persons, firms, and corporations for whom I have made appraisals are: (state names of former clients). In connection with my work as an appraiser, I have taken various courses in appraising as follows: (name the courses taken). I am a member of the Los Angeles Realty Board, the California Real Estate Association, the National Association of Real Estate Boards, and the American Institute of Real Estate Appraisers."

This briefly delineates the scope of the expert's answer which is intended to convey the impression that this expert is a man of considerable experience and one who is possessed of a higher order of knowledge than the average person encountered in the street and for that reason entitled to render an opinion as an expert.

The witness may take five or thirty or more minutes to give his answer—to state his qualifications. This can be done from the single question if the witness is experienced and the question is asked in the broad way stated.

Here let it be known that the witness may in most cases take to the witness stand his notes to which he may refer in order to refresh his memory and to conserve the time of the court. However, he must keep in mind the fact that the opposing counsel has a right to inspect any notes to which the witness refers.

In some instances an intermediate question may be asked, as follows:

"Mr. Witness, you stated you are a member of the American Institute of Real Estate Appraisers. Please tell the court what this Institute is and how admission is gained."

The witness then answers:

"This Institute is an organization of professional appraisers similar to the American Bar Association of lawyers, the American Medical Association of doctors, and the various technical societies of engineers. Admission is granted only after a careful investigation of the honesty and reputation of the applicant, and then after the applicant has demonstrated his ability in two written examinations which he is required to take."

Question No. 2. "Now, Mr. Witness, before forming an opinion of value (or damages), **what did you do?**"

Answer: "First, I secured maps of the property here involved and of the district in which it is situated. Then I made a personal inspection of the property and of the district. I talked with owners of property in the neighborhood, with tenants, and with real estate brokers operating in the district. I made an analysis of various sales that had taken place and also of various properties that were offered for sale at the date of this appraisal. I made a study of the value of the subject property as suggested by reproduction cost less depreciation, and still another study of the value suggested by the capitalization of net income." (All the things actually physically done are stated in answer to this question.)

Question No. 3: "Mr. Witness, before forming an opinion of value (or damages), **what matters did you consider?**"

This is the place to get into the record the bulk of the testimony on direct-examination, a desirable procedure for the reason that the witness may not be cross-examined, in which event the testimony of the witness would be left up in the air—without support.

Answer: "I took into consideration the size, shape, and topography of the land; the size, shape, and kind of construction of the building, its age, general condition, and fitness for the site; I considered the highest, best, and most profitable use of the property and its probable value for each of those uses; I considered the character of the street in front of the lot, the condition of the district, its distance from the downtown shopping district, its accessibility to school, stores, churches, places of amusement, transportation, earning capacity of the people in the neighborhood, etc., etc.; I considered the value of the subject property as suggested by the cost or reproduction approach; I considered the value of the subject property as suggested by the capitalization of the net income that

it might be expected to produce. I considered the value of the subject property as reflected by a number of sales of comparable properties in the neighborhood."

The appraiser then goes to a district map, which has been introduced into evidence, for the purpose of indicating thereon the locations of the properties sold which he considered. He proceeds with his testimony as follows:

"On plantiff's Exhibit "A", I am outlining with a red pencil a lot which I am designating with a red number one; this lot is 50 x 140 feet to a 20-foot alley and is the third lot north of the property involved in this action. It was sold on December 7, 1936, by John Smith to William Brown. I am acquainted with the sale price and terms and can give them, if desired." (Note: Sales prices cannot be stated on direct-examination. This can be brought out only on cross-examination.)

"On the same exhibit I am outlining with a red pencil a property which I am designating with a red number two; this lot is 50 x 140 feet to a 20-foot alley and is the sixth lot south of the property involved in this action. On this lot is a five-room frame and stucco bungalow, having 1,263 square feet of floor space. The house was built in the year 1925. It has plastered walls, hardwood floors, except the bathroom which is tile, two bedrooms, etc., etc. This property was sold on November 14, 1936, by Harold Robbins to Alfred Jones. I am acquainted with the sale price and terms and can give them, if desired." (Witness continues until all comparable sales are shown on map. He then follows with listings.)

"On the same map I am outlining with a blue pencil a property which I am designating with a blue number one; this lot is . . . (described in detail). It was on the market offered for sale at the date as of which the subject property is to be valued. The owner is Joseph Higgins, and the property is listed with Charles B. Shattuck, a Realtor whose office is at 2510 South Vermont Avenue. I am acquainted with the price and terms asked for this property and can give them, if desired." (Witness continues until all comparable listings are shown on the map.)

"I considered the opinions of value of the property here in question as expressed to me by various owners, tenants, and real estate brokers. Some of the people with whom I talked about the value of the subject property are: (Here recite the names of the people, their occupations, and their addresses.) I considered the value of the property based upon its physical suitability for a hospital; and for a church; and for a low-cost housing project; and for a small subdivision into lots similar to the surrounding property. I considered the age of the district, its condition and appeal, the class of people living in the area with particular reference to occupation and earning levels."

The above is a simple statement of consideration leading to the valuation of the whole property. In cases of partial taking, such as a street opening or widening project, it will be necessary to continue with a discussion of matters considered that will have a bearing upon the damages to the property not sought to be condemned—the severance damage. Such discussion might be as follows:

"With particular reference to the severance damage, I also considered the diminution in the average price per square foot and the burden placed upon the remainder by reason of the taking. I also considered the special benefits[1] that will accrue to the land not taken by reason of the taking and the construction of the improvement in the manner proposed." (Any particular details of severance damage considerations may be stated at this point.)

The foregoing, the answer to Question No. 3, is the most important part of the direct-examination. In this procedure the witness gets into the record the reasons for his opinion which is to come. While it is true that a witness has the right to give the reasons upon which he bases his opinion, it is advisable to have the witness give them before he renders his opinion of value, instead of after, in order to forestall objection of adverse counsel that counsel is attempting to cross-examine his own witness.

It is particularly desirable for a witness to get in all of his testimony on direct-examination for the reason that he may not be cross-examined. If the witness merely qualifies and renders his opinion, adverse counsel can waive cross-examination and make it appear that the testimony did not warrant consideration.

[1]Mr. Schumtz refers in his example to the practice in a certain jurisdiction. In some states and under certain conditions "benefits" are a matter of independent determination in other proceedings.—Ed.

However, if the witness gets his reasons in the record on direct-examination, then the opposing counsel is forced to cross-examine, at his own peril, in order to avoid the jury concluding that he was afraid of the witness. If the witness is honest, competent, and well-prepared, his cross-examination may be harmful to the cross-examiner.

Question No. 4: "Now, Mr. Witness, by reason of your investigation and by virtue of your experience, what in your opinion was the market value of the subject property, lot 16 in block 5 in tract 4672 as per map recorded in book 212 at page 63 of maps, records of Los Angeles County, California, as of December 28, 1936?"

Answer: "Seven Thousand Five Hundred Dollars."

Counsel: "That's all. Take the witness."

This concludes the direct-examination if the value of the entire property is the matter at issue. However, if only a portion of the property is taken, the concluding questions would be:

Question No. 4A: "How much in your opinion is the market value of the portion sought to be condemned?"

Question No. 4B: "In your opinion how much is the severance damage, if any, to the part not sought to be taken?"

Question No. 4C: "In your opinion how much, if any, is the amount of special benefits that will accrue to the part not taken by reason of the taking and the construction of the improvement in the manner proposed?" (This question is proper only if benefits may be considered.)

This would conclude the direct-examination.

In the presentation of testimony upon direct-examination the witness may wish to illustrate his testimony with maps, charts, architect's plans, or photographs. In analyzing the value of the land, he may have prepared plans of a hypothetical structure as a part of the study. These sketches or charts may be placed on exhibit, on the blackboard, and marked for identification to illustrate the testimony of the witness. Thereafter, they may or may not be admitted into evidence.

The witness may take to the stand his appraisal report, maps, charts, computations, and notes for the purpose of refreshing his memory. He may refer to them as often as necessary. However, they are subject to the inspection of adverse counsel.

It is not uncommon for adverse counsel to offer to concede the qualifications of a witness. This is good strategy, for the adverse counsel, if the witness is eminently qualified. However, the expert's own counsel should not agree to the acceptance of the qualifications. He should insist upon his right to have his witness recite his qualifications—both general and specific—particularly in jury cases. Perhaps there is no better build-up of a witness than his recitation of his years of experience, the various appraisals he has made, the people who have paid him for his opinions, etc.

CROSS-EXAMINATION

Any statement made during the direct-examination is subject to questioning upon cross-examination. This is a right that cannot be denied the adverse counsel. If, for illustration, a witness should die or disappear after his direct-examination but before cross-examination, or before adverse counsel has waived cross-examination, then and in such event the testimony of the witness is stricken from the record and the jury instructed to disregard it as though it had not been given.

The cross-examination of an expert witness is a procedure, the purpose of which is to bring out the truth or to impeach a lying witness and/or to develop facts which were purposely or inadvertently omitted from the direct-testimony. Such examination usually follows either or both of two lines: (1) an attempt to discredit the *qualifications* of the witness; (2) an attempt to discredit his *testimony*.

The cross-examination of an expert is a dangerous procedure if the expert is really qualified and prepared. Trial lawyers adhere to the practice of never cross-examining an expert more than nec-

essary. As a general statement it may be said that, if the attorney does not break the witness, the witness will break the attorney. While the purpose of cross-examination is to discredit the expert's *qualifications* or his *testimony*, the cross-examination may be either *actual* or *apparent*. The actual cross-examination is a real, serious attempt to discredit the witness, i.e., to reduce his testimony either by minimizing his qualifications or testimony or by otherwise bringing him into disfavor with the court, or jury. The apparent cross-examination is designed to appear to be cross-examining and yet escape the danger of an actual examination. This is for the purpose of avoiding a conclusion by the jury that the testimony of the witness was too strong to be met.

The testimony of an expert usually will be fortified or reduced by cross-examination. For this reason the cross-examiner necessarily gambles with the outcome of his case at this stage of the proceedings. If the expert gets his considerations into the record on direct-examination, as should be done, the adverse counsel is forced to cross-examine under the penalty of a psychologically bad impression on the jury; and if he does examine, he may make matters worse. It is because of these conditions that the novitiate attorney in a condemnation trial is beset by numerous pitfalls.

The cross-examination of an expert on value may pursue the following course:

Question: "Mr. Witness, how old are you?"
Question: "How long have you been an expert on value?"
Question: "What was your occupation prior to that?"
Question: "For what period of time were you so engaged?"
Question: "Then, what was your occupation prior to that?"
Question: "For how long were you so engaged?"

This line of questioning may take the witness back to the cradle. It is a "fishing" expedition in which adverse counsel may learn something that he can "harp" on in his argument to the jury. For illustration if the witness had been engaged in the appraising of real estate for only three years and prior to that had been a grocery clerk for five years, etc., the attorney could argue that this witness was lacking in seasoned experience and therefore lacking in good judgment and that he had had many jobs at which he had been a failure before settling in the groove in which he now found himself.

Question: "Mr. Witness, in your entire experience as a real estate broker (or salesman) how many properties of the size or value of the subject property have you sold?"
Question: "How many have you appraised for a fee?"
Question: "Now, confining your testimony to the immediate area, say five blocks in each direction from the subject property, how many similar properties have you sold?"
Question: "How many have you appraised in the same area?"
Question: "When was your last sale made?"
Question: "When was your your last appraisal made?"
Question: "How far, in blocks or miles, is your office from the property here under appraisement?"
Question: "Now, Mr. Witness, is it not a fact that in all your experience as a real estate broker and as an appraiser you have never sold nor appraised any property within a mile of the property you have just testified about? Answer yes or no."

The purpose of this line of questioning is to show the lack of experience or acquaintance of the witness, thus tending to reduce his qualifications as an expert in so far as this type of property is concerned. The witness may be thoroughly experienced in industrial or farm properties and yet know nothing about office buildings. However, before commencing this line of questioning, the attorney should be acquainted with the expert's experience, otherwise the answers to these questions may "hold him up" instead of "tear him down." In this regard the attorney's own witnesses can be of great help in advising about opposing experts.

Question: "Mr. Witness, have you ever taken any courses in real estate appraising to increase your knowledge of the subject?"

If the witness says "no" but that he has had forty years of experience, then the following may be asked:

Question: "Mr. Witness, then your conclusion is based solely upon your experience, is it not?"

Question: "Mr. Witness, if you had had forty years of experience in watching the sun rise and set, would this experience assist you in computing the distance of the sun from the earth at any time?"

Question: "Then it is a fact, is it not, that knowledge is as important as experience?"

Question: "And is it not a further fact that experience does not necessarily develop knowledge? Answer 'yes' or 'no.'"

The foregoing is a line of questioning which may be employed to reduce the qualifications of the witness. However, the examiner should know something about the witness before the questions are asked. The answers may be damaging.

Question: "Mr. Witness, regarding the figure you testified to in your direct-examination as your opinion of value, was this a 'market value' figure?"

Question: "What do you understand market value to be?"

If the witness does not know what market value is, then move to strike all his testimony.

Question: "You testified that, in your opinion, the value of (or damages to) the property in question was so many dollars. For the purpose of understanding each other I wish to ask you this: Is that figure your opinion of what the property can be sold for or what you think the property is worth?"

If the reply is what he thinks it is worth, then move to strike. His opinion of *worth* is neither contemplated nor desired—it is *market value* which is the yardstick. Sometimes a witness will testify to an insupportably high figure, well knowing that the property could not be sold at that price yet believing it is worth it. This is not a proper value. The court is not interested in what a witness believes property to be worth but rather what he believes it can be sold for in the open market. A motion to strike would be granted.

Question: "Now, let us analyze the courts' definition of market value so that I may understand what you had in mind when you arrived at your opinion of value. According to the courts' definition—'Market value is the highest price estimated in terms of money that a property will bring if exposed for sale in the open market allowing a reasonable time to find a purchaser who buys with knowledge of all the uses to which it is adapted and for which it is capable of being used.' Now, Mr. Witness, in arriving at your opinion of value, how long did you assume to be a reasonable time to find a purchaser?"

Question: "In this particular case what mental processes did you indulge in in arriving at this reasonable time?"

Question: "Is it not a fact that the reasonable time necessary to find a purchaser will depend upon many conditions, such as (1) the reasonableness of the price asked, (2) the general business conditions of the times, (3) the condition of the supply of this kind of property in relation to the demand for it, etc.?"

The purpose of this line of academic questioning is to slow up the testimony, confuse the witness, or show him off as being poorly informed.

Question: "On your direct-examination you stated that the market value of this property is $15,000, in your opinion. Please tell the court how much of that value is represented by the land and how much by the building?"

Suppose the witness says $4,000 for the land and $11,000 for the building.

Question: "How did you arrive at a figure of $11,000 for the building?"

Suppose the witness says, "by multiplying the square foot area by $3.00 per square foot, less twenty per cent depreciation."

Question: "Considering this figure of $3.00 per square foot as the new construction cost, why did you use $3.00 instead of $2.75 or $3.25?"

Question: "In arriving at the $3.00 per square foot figure, what wages per day did you assume would be paid to the various workmen needed to build such a structure, such as brick masons, rough carpenters, finish carpenters, plasterers, etc.?"

The purpose of this line of questioning is to show, if possible, that the witness merely guessed at the unit cost and to destroy confidence in his estimate. It can be extended to show how he arrived at a twenty per cent depreciation instead of fifteen or twenty-five per cent. Continuing along another line, from the same testimony:

Question: "Now, Mr. Witness, is it not a fact that this figure of $11,000 is a cost figure, that is, represents physical cost?"

If the witness answers, "yes," move to strike the statement on the ground that cost is not the proper measure. Value—market value—is the proper yardstick. However, if the witness states that, in his opinion, the structure enhances the value of the land in an amount equal to its cost, his testimony will stand. Again, continuing along another line:

Question: "Mr. Witness, you testified that, in your opinion, the property here involved has a market value of $15,000. When you formed this opinion, did you know of a similar property just three lots away which is legally described as lot 17 in block 5 of tract 8271 and which is commonly known as No. 1327 Seneca Street, being a lot 50x150 feet to a 20-foot alley and having on it a one-story brick, commercial building 50x100 feet which is five years old?"

The answer probably will be "no."

Question: "Had you known that this property was sold on December 14, 1936, by its then owner, Mr. James Brown, to Harold Smith for a total consideration of $10,000 on terms of $3,000 cash and the balance represented by a purchase money first mortgage payable $150 per month, including five per cent interest until fully paid,—had you known this—would it have affected the opinion of value you rendered—$15,000?"

This line of questioning is continued until the data are exhausted, i.e., until all known sales and listings of similar properties in the area have been brought to the attention of the witness. The purpose of this line is twofold: (1) to get before the court, or jury, the prices at which similar properties have been sold and (2) the prices at which others are offered for sale. On direct-examination an expert can discuss sales and listings in minute detail, but *he cannot mention* prices. This is a matter that can be brought out only on cross-examination and then solely for the purpose of testing the knowledge of the witness, and not as a determinant of value.

However, the effect upon the judge or jury extends beyond the testing of the witness; it informs them of actual sales and listings as a guide to their own conclusions.

The second purpose of this line of questioning is to discover the fairness of the witness. If he is informed of a number of sales and listings at substantially lower prices than the one to which he testified and says that the knowledge of this data would not have affected his opinion, then he gives the appearance of being a biased and prejudiced witness, thus tending to reduce the worth of his testimony.

Question: "Mr. Witness, you testified to a severence damage of $3,000. Please tell the court (or jury) just how you arrived at exactly $3,000 rather than a greater or a lesser figure?"

Assume that the witness replies that this figure is based upon the decreased rentals obtainable after the taking of the portion sought. Then a motion to strike is in order on the ground that the witness has based his severance damage estimate upon "damages to business," whereas damages to business are not compensative; or suppose that the witness replied: "That's my opinion based upon many years of experience in this kind of work." In all probability the witness did use some mathematical process in arriving at the figure, and ofttimes he can be forced to divulge it by this line of questioning.

Question: "Mr. Witness, do you want this jury to understand that you picked this figure of $3,000 out of the thin air, without rhyme or reason or any logical process of thinking?"

If the witness still evades telling how he arrived at $3,000, then continue:

Question: "Mr. Witness, did you or did you

not take some figure and then take some other figure and add or subtract or multiply or divide them in order to get $3,000? Just what figures did you employ?"

If the witness still evades, then make him admit he is guessing. While it is true that severance damage cannot be determined accurately and must remain a matter of opinion, it is likewise true that there are different grades of opinions. For example, a *guess* is an opinion formed without sufficient evidence—a conjecture or surmise; and an *estimate* is an opinion usually implying careful consideration or research. Valuation contemplates *estimates* rather than *guesses*.

Question: "What is your understanding of the term 'severance damage'?"

Many witnesses do not have a proper understanding of this term. The severance damage testimony may be stricken if it can be shown that the witness does not know what it is; or, if, in the hope of giving a real good definition, the witness attempts to refer to some book or other writing, objection should be made on the ground that the witness did not write the book and/or on the ground that it is unnecessary for an expert to refresh his memory on this point.

If the witness happens to be inexperienced or can be taken by surprise, the following question may put him "in a hole":

Question: "Mr. Witness, what fee are you getting for this testimony?"

If he admits that his fee is based upon the award, a contingent fee, his testimony may be stricken. If he is fearful of admitting the amount of his fee, although legitimate, his hesitation may create a bad impression. If his fee is less than the normal fee, the attorney in his argument to the jury can lay stress on the apparent fact that this man is so poorly regarded that he cannot command the regular fee; or, if he is to receive an unusually large fee, the argument would be that, for this amount of money, any kind of testimony could be purchased.

Question: "Mr. Witness, is it or is it not a fact that when you are making an appraisal for the condemning party, e.g., the city, you will report a lower value than if you were employed by the property owner?"

If he says "yes," he has ruined his testimony.

If, on direct-examination, a witness has testified to an unreasonable or unsupportable value which can be disproven by computations on cross-examination, it may be advisable to have the witness go to the blackboard and make the computations thereon for the benefit of the court or jury. This is an excellent way to show up a witness. But great danger attends this procedure if the witness is clever and experienced. Here again caution should be urged in the cross-examination of an expert. The attorney should be reasonably well acquainted with the qualifications and experiences of the man he cross-examines. This acquaintance is brought about by his own appraiser.

The two words most pregnant with harm to a cross-examiner are "how" and "why." These words "open the door" to let the witness talk and talk and talk in answering the question. Once the door is opened, a good witness will romp through and trample underfoot the case of the cross-examiner.

Also, if on cross-examination the witness is asked a question which requires an explanation, he should first give his answer and then request permission to explain it. If the cross-examiner objects on the ground that his question has been satisfactorily answered, then the witness should appeal to the judge, requesting permission to explain his answer. If an explanation is in order, the permission will be granted.

REDIRECT-EXAMINATION

Upon the conclusion of the cross-examination, the witness' own counsel may then reëxamine the witness, confining his questions to the scope of the cross-exami-

nation for the purpose of clarifying anything obscured by the cross-examination or building up the witness on the points torn down by the cross-examiner. Essentially, it is a salvaging procedure—the attempt to save as much of the testimony as possible, particularly after a devastating cross-examination. However, if the witness has held his own during the cross-examination, then there will be no need for redirect-examination.

In the redirect-examination the direct case cannot be reopened. The scope of the redirect-examination must be held to matters discussed during the cross-examination. If, on redirect-examination, the witness was allowed to go into matters not testified to in his direct-examination, such a reopening of the case might conceivably render the trial interminable. The direct testimony limits the scope of the cross-examination, and, in turn, the cross-examination limits the scope of the redirect-examination.

Upon conclusion of the redirect-examination, adverse counsel may then recross-examine, that is, inquire into matters discussed during the redirect-examination.

Depreciation in Industrial Properties

By R. M. FISCHER

It is always stimulating to hear something about "the other fellow's problems." The field of appraising is broad indeed, and the evaluation of industrial properties raises many questions that differ from those found in the usual income properties even though the fundamentals may be the same.—Ed.

CONSIDERING the existing wealth of controversial literature on the subject of depreciation, further discussion will scarcely assist in clarifying the theoretical background of the problem; therefore, this contribution strives not to touch any theoretical points but to treat only "some practical everyday problems of the appraiser." The reader will not have to provide himself with the heavy armor of interest tables, monetary theories, or a degree in higher mathematics.

It should be recognized at the outset that the determination of depreciation of industrial property frequently requires a different treatment from that generally followed in the valuation of income properties.

ACTUARIAL THEORY NOT SUITED TO INDUSTRIAL PROPERTY

An apartment house or office building is designed to render a service, inseparable from the property itself, being essentially the sale of useful space. Land and improvements, therefore, constitute a complete business enterprise with a well-defined scope of activity and earning power. Even where the sale of space is incidental to other activities (merchandising in department stores or entertainment in theatres), rent returns are the most important measure of the economic value of real estate. These properties cannot be moved without practically complete loss of the investment in depreciable assets.

In contrast, industrial enterprises use real estate, as well as machinery, equipment, tools, patterns, etc., merely as a tool in the production process. All or part of the property is frequently replaced or moved without destroying the identity of the product or service characteristic of the business as an entity.

It follows that real estate improvements generally have a single, uniform life expectancy, limited by physical or economic factors affecting the property as a whole. Except for repairs and minor replacements of short life equipment, depreciation may, therefore, be estimated upon the remaining expectancy of useful life of the improvements as a whole.

As a result, a statistical and actuarial attitude has developed among real estate appraisers in dealing with depreciation problems. The use of interest tables and present value factors is the accepted practice. Detailed theories have been developed in regard to the application of sinking funds and the relation of the financial structure of the enterprise to amortization provisions and prevailing interest rates.

Such treatment is generally inapplicable to industrial property because life expectancies and earning power of departments, groups, and even units of a manufacturing plant show extreme variations and divergent trends. An invention, new competition, or merely a change in design of products may destroy the value of a machine, a set of tools, or the use of a certain number of square feet of floor space without disturbing the remaining portions of the plant. Obviously, no actuarial theory will fit the complex factors affecting the depreciable assets of the business as a whole or all its parts.

DIFFICULTIES IN FORECASTING EARNINGS

The effect of the depression years has been to place emphasis upon present and prospective earning power as the basic measure of value and, therefore, indirectly, as a basic measure of depreciation. This approach is applicable, at least in theory, to industrial property as well as real estate. The nature of real estate permits of comparatively well-supported judgment of future size and trends of earnings over a number of years, but there exist many limitations to the logical and accurate determination of prospective earnings from industrial property. This is due to the injection of working capital elements and the unpredictable influences of ownership, management, competition, and other economic and intangible factors. This applies particularly to estimates of depreciation for parts of an industrial property; individual plants, departments, classifications of property, or single production units create the additional problem of allocation of earnings and overhead charges.

What is the earning power, competitively determined, of laboratory floor space, a forge shop, a group of drill presses, a steam turbine, or a drafting board? What is the proper allocation of charges for supervision, light, heat, and other factory overhead for these departments or units? Competitive developments, a rearrangement or relocation of units, or a change in product design may affect their utility and value overnight. Moreover, in only a few instances are cost accounting records and other necessary information available in sufficient detail to form other than a more or less arbitrary judgment for this allocation.

INDUSTRIAL PROBLEM HAS WIDE SCOPE

Due to these difficulties, earning power is generally found to be an impractical standard for determining depreciation of individual industrial property; therefore, other or supplementary considerations and methods must be employed. The industrial appraisal technique, however, has no different theoretical basis of valuation. The industrial problems have a somewhat wider scope than real estate valuations and require a broader background of technical and economic knowledge because of the diversity and complexity of the subject.

A practical example will best serve to illustrate this. We are asked to determine the depreciation and value of the physical assets of a steel foundry which has been unprofitable for a number of years and is to be acquired by a competitor. The company owns a large plant site on high priced land, occupied only in part by buildings. The idle area was originally acquired as a reserve for expansion but has never been utilized and is yielding no income.

The foundry buildings are of brick and steel frame construction, nearly fifty years old but structurally sound. Due to the elimination of a principal customer of the business, the average castings produced have decreased from 1200 pounds to less than 300 pounds; consequently, cranes, runways, and supporting columns are in excess of normal capacity and weight.

The arrangement of the buildings does not permit the most efficient handling of raw material and castings as they go through the various stages of manufacture from the casting floor through the annealing, cleaning, and machining departments. Owing to lack of yard space at the charging end of the furnaces, part of the foundry is used as storage for steel scrap and foundry sand, which requires expensive multiple handling by hand and conveying equipment. The roof of the foundry bay is improperly constructed, resulting in poor ventilation and lack of dust protection, which faults would be corrected through modern design. A steam power plant, with thirty-five-year-old low pressure boilers and slow, obsolete type steam engines, generates direct current for cranes and other variable speed motor applications and pro-

vides processing steam and compressed air for manufacturing purposes.

There are three acid practice, open hearth furnaces, one of which has been permanently idle, another is in the process of reconstruction, and the third, now in operation, has sufficient capacity to furnish steel for the entire plant requirements upon a twenty-four-hour per day basis. Acid practice furnace operation, under prevailing premium prices for the required low phosphor content scrap iron, is uneconomical. It is estimated that the cost of a new lining of chromium brick for basic operation will be saved within less than half a year, especially considering the existing need for a new lining of the furnace in the near future.

Two annealing furnaces are of the side-charge type, having two narrow openings for the charging of bulky castings. This is a difficult and time-consuming process; moreover, the charging machine takes up an excessive amount of floor space.

During former years the plant manufactured its own drop forgings, but the volume of work of this type has decreased substantially, and the parts are now purchased from outside sources so that the equipment in the drop forge department is idle.

A change in the design of the main product thereby has occurred in recent years, incorporating more finished surfaces and requiring a substantial amount of metal working machinery as well as the necessary dies and special tools. Due to the irregular character of demand, this department works in three shifts during a period of about twelve weeks of the year and is little utilized thereafter.

ECONOMIC, COMPETITIVE, AND SPECIAL CONSIDERATIONS

The above outlines merely a few of the more significant facts which have an obvious bearing upon the depreciation and value of this plant. There exist further considerations of a more general, competitive, and economic character, such as the observed westward movement of the main customers of the business, which created a comparatively unfavorable freight differential. A study of sales shows that, even discounting the effect of the general business depression, the enterprise has suffered a loss in competitive standing and proportionate share of available business, due in part to the loss of a sales executive who left the organization and joined a competing company. Furthermore, the firm has conducted no research or development of product and does not possess patents or trademarks.

In contrast, the prospective purchaser occupies a leading position in this particular branch of the industry, with diversified products. Due to continuous product and sales research, he enjoys excellent patent protection and a high reputation in the trade. The value of the physical facilities of the former enterprise is evidently closely bound up with their utility as a part of the new consolidated business. Any change in the business outlook, therefore, has a bearing upon the depreciation and value of the individual assets.

SPECIAL CONSIDERATIONS

The purpose of the appraisal and the specific qualifications of the desired valuation have been outlined. The next step is to establish the relative weight which should be given by the prospective purchaser to the factors of physical deterioration, technical and functional obsolescence, and remaining expectancy of useful life of the various assets. While we shall attempt only a brief discussion, the scope of the problems can be sufficiently illustrated.

Although, generally, "land" is considered to possess one definite "market" value, the purchaser in this instance is likely to question whether the investment, measured by the comparative value of the surrounding tracts, is justified upon a competitive basis.

It would be possible to acquire a plant site equally well located as to labor supply, raw materials, and market for products for considerably less money. The now idle portion of the land will probably remain unused for expansion purposes. Since it is too small an area for a substantial factory site, it will have to be disposed of at some sacrifice against prevailing market levels. This situation presents an example of "land depreciation" against market value, for the given purpose of the appraisal.

We now turn to the buildings. While we have not found any permanently idle floor space, excess construction is present in unduly heavy columns and crane runways, and obsolescence is evident in the roof construction. The value of the structures used for storage purposes appears inestimable. It would hardly be necessary to use enclosed space for raw material storage, although some slight advantage from weather protection may be claimed. The brick and steel constructed buildings have an indefinite life under proper maintenance, but the economic background of the business points to potential plant removal with attendant change of ownership, protracted period of idleness, and possibly complete abandonment. These factors constitute the evidence of "building depreciation" rather than the physical condition of the structures.

The value and depreciation of the power plant and its equipment present a different problem, in which competitive service, savings, and earning power are the controlling elements. If the records show that costs are unduly high for the generation of direct current as compared with purchased alternating current energy and the use of converters, this may indicate complete lack of utility and value for the entire department. However, the necessity for investment in a boiler plant for heating and steam requirements would remain, so that electric energy is essentially a by-product of the plant. Here the standard of value would be the estimated capitalized savings derived from a comparison with the cost of purchased services and energy, which estimates must also reflect a consideration of safeguards for the vital power supply.

REPRODUCTION COST METHOD NOT APPLICABLE

This problem illustrates the futility of "reproduction cost" as a measure of value in those instances where service rather than the existing unit is to be replaced. High pressure boilers of equal capacity will not only cost less but will yield savings in fuel. High speed turbo-generators and modern switchboard equipment will represent but a portion of the original investman in slow reciprocating steam engines and large diameter, direct current generators. Obviously, depreciation, measured against historical cost, will not give a sensible picture of the operating condition of the power department. Where public utility services for steam and electric energy are available, the competitive investment is minimized, yet the plant may have a residual value as a standby unit or for the purpose of decreasing peak loads and consequently demand charges.

From similar considerations, the indicated excess capacity of furnaces and crane equipment may, to some extent, represent desirable operating reserves for peaks and emergencies, although in a new plant these facilities would not be replaced. The determination of depreciation, therefore, is largely a question of comparison with reasonably adequate facilities and the physical condition of the units.

In appraising obsolete equipment, such as the annealing furnaces and charging machine, it is often possible to make a comparison with an entirely different operating group (in this instance with car-type, semi-continuous furnaces). Such equipment would lessen investment, floor space requirements, production failures, and operating costs. If the computations indicate that these facilities are a detriment

to the plant as a whole, then the "no value" conclusion of the appraiser signals the need for actual replacement by the purchaser.

In the case of idle equipment, the standard of comparison is generally the second-hand market realization upon either a wholesale or piecemeal basis. Idle property may become active after it is taken over by the new owner. In our example, the forge shop equipment may be used to supply parts for the purchaser whose present capacity for forgings is limited. Depreciation of formerly idle equipment is accordingly reduced from this point of view.

CONCLUSIONS

This example illustrates some of the practical problems and considerations frequently encountered in the analysis of depreciation of industrial property. Certain principles, procedures, and general conclusions in regard to the classification and measurement of depreciation are discussed in the following:

I. *Classification of Depreciation*

1. *Physical deterioration* is determined after inspection, tests, and analysis of maintenance records, and in accordance with age and condition and the average life expectancy for the class of property under its observed utilization.
2. *Technical obsolescence* represents the effect of progress in the art, which finds expression in advanced design and results in improved service or operating characteristics and in savings as compared to the cost or investment of older models or processes, etc.
3. *Functional obsolescence* is the lessening in value of property used in production as part of a specific enterprise, controlled by its relation to plant layout, capacity, flow of production, or design and character of product.

II. *Measurement of Depreciation*

1. *The replacement standard:*
   (a) Capacity basis.
   (b) Investment basis.

   The service or utility of the property rather than the size, model, or kind should form the standard of replacement. The standard of "normal utilization" varies greatly between industries and even within industries. The establishment of the comparative capacity and investment standards is the foremost task of the industrial appraiser and must be based upon an intimate knowledge of the operating requirements and established practices and trends of the particular industry. Obviously, experience and the ability to analyze the information gathered from interested sources is of paramount importance.
2. *Deficiency against "Perfect Condition":*
   This step consists of the comparison of the existing condition of the property with the "normal" or "ideal" replacement standard. The comparison may be made by estimating the cost of restoring the property to normal condition or efficiency or, where this is impractical, by capitalizing the estimated losses against normal, efficient performance. This analysis requires primarily experienced judgment rather than involved calculations, the accuracy of which is necessarily limited.
3. *Correlation of depreciation of individual property units:*
   The preceding considerations deal with individual property units. Since there exists generally no single, controlling factor for the determination of the life expectancy and depreciation of various portions of an industrial enterprise comparable to that of real estate property, correlation of the depreciation and value established for the individual units or departments is further required. Over-improvement of a given site influences depreciation of the property as a whole, due to the lessening of earning power; similarly, the value of the portions of an industrial property must be harmonized with their collective operating trends and earning power. A declining business would hardly be warranted in purchasing new machinery and equipment unless there existed a reasonable assurance that the investment would be reclaimed through added earnings.

   The influence of the business cycle upon depreciation is often overlooked. During times of low plant activity, the process of obsolescence is slowed down, since it depends largely upon the elapsed time as well as the intensity of utilization. This lessening of obsolescence during depression periods temporarily hides the continuing accumulation of "prospective depreciation," and, when the wheels again start turning, the cumulative effect on such deferred depreciation becomes painfully apparent and calls for major adjustments in the value of the plant investment.

> In any analysis of depreciation, therefore, the current phase of the business cycle and the probable effect of increased or lessened production upon the utility and value of the property must be carefully considered. The effect upon the competitive value of plant property, due to the development of new enterprises, products, production facilities, labor-saving devices, and other economic influences, is best reflected in an adjustment of the depreciation of the individual property elements determined upon a physical, technical, or functional basis.

As a check against the conclusions arrived at in the foregoing manner, market value comparatives are sometimes available and desirable. They may be based upon capacity or investment, the same as those adopted for real estate properties (such as value per square foot of floor space or per front foot of lot). Similar standards of comparison exist for certain types of industrial property or standard departments (such as the investment in a cement mill—per barrel of annual capacity; in a boiler plant—per installed boiler horsepower; or the value per spindle in a textile mill). However, the application of such comparatives requires great care since the highly technical character of definitions for capacity measurement makes superficial calculations frequently misleading.

This generalized outline of principles, methods, and practical approaches to the depreciation problem of industrial property is intended to serve primarily to direct attention to the important task of the appraiser in correlating many diversified sources of information, i.e., from the management, the cost accountant, and the plant engineer, in addition to the data gathered from the general statistical and economical background of the enterprise and industry. Such analysis and appraisal require independent and experienced judgment, besides a broad technical and accounting knowledge, but hardly the application of an actuarial mind.

The growth of appraisal organizations, with specialized personnel for industrial valuation problems, overcomes in part the difficulty of the wide scope of technical skill, knowledge, and experience required. It would hardly be possible for the individual engineer or accountant, however competent in his own field, to undertake industrial valuations yielding provable, logical, and coordinated results.

Techniques in Value Estimation

By AYERS J. DUBOIS

THREE types of estimates are commonly necessary or useful in real estate valuation work, namely:

1. Reproduction Cost Estimates.
2. Estimates of Market Price Obtainable.
3. Estimates of Capitalized Value of Net Income.

The common use of these three types of estimates lays the foundation for designating the three procedures or approaches in the solution of valuation problems, namely:

1. The Reproduction Cost Approach.
2. The Comparative (i.e., Market Price) Approach.
3. The Capitalization of Net Income Approach.

One or all of these approaches are useful or necessary in the solution of any valuation problem. However, the importance or usefulness of any particular approach in connection with specific problems varies according to the nature of the property involved and to some extent according to the purpose for which the appraiser's services are desired.

In one instance the result produced by means of the Reproduction Cost Approach may be the most significant. In another case it may be of minor importance. In all cases involving properties to which rental values can be readily assigned, the Capitalization of Net Income Approach is a valuable and indispensable aid.

REPRODUCTION COST APPROACH

In all real estate appraisal work it is essential to be in constant remembrance of the fact that value may be different from cost. At the same time, it must be recognized that cost *tends* to indicate value. Obviously, if cost is incurred but equivalent value does not result, further costs will not be incurred until cost and value come into agreement. At a given time cost and value may be equal under one set of circumstances but different under other sets of circumstances. At other times cost and value cannot be equal because of maladjustments in the business structure, such as those which cause a total disappearance of demand.

It is generally agreed in real estate valuation work that the cost of replacement of a property fixes the limit of possible value. Because of this fact, as well as because of the matters discussed in the preceding paragraph, estimates of the reproduction cost of properties are useful to real estate appraisers. In any case involving new or nearly new buildings, the Reproduction Cost Approach should be included among those utilized. However, the significance of the resulting estimate will not become apparent unless and until conclusions have been drawn from the use of other available approaches. For example, it would be impossible from the Reproduction Cost Estimate alone to determine whether or not over-improvement or under-improvement existed, nor would it be possible to conclude whether or not the structure was a misplaced improvement. Conclusions regarding these matters can be drawn only in the light of conclusions based upon other information which must be gathered and interpreted.

If it is recognized that the improvement in any case is not a proper improvement for the site upon which it stands, then the estimate produced by means of the Reproduction Cost Approach will not constitute good evidence regarding the value of the property under consideration. However, the matters that will have to be considered in the reproduction cost analysis will be very useful in connection with the estimates produced by the Comparative Approach and Capitalization of Net In-

come Approach.

In cases involving structures in mid-life or late life, the Reproduction Cost Approach is of minor importance, and in some instances an estimate of reproduction cost of the property may be entirely unnecessary.

The Reproduction Cost Approach involves the following steps:

1. The making of an estimate of the reproduction cost of the improvements upon the site.
2. The making of an estimate of the cost (or value) of the site.
3. The making of an estimate of the indirect items of cost attendant upon the construction of the improvement on the site.
4. The making of an estimate of the costs of bringing the completed property to a degree of occupancy or use equivalent to that existing at the time of appraisal.
5. The addition of the four estimates mentioned to produce the estimated reproduction cost of the property under appraisal.

THE COMPARATIVE (I.E., MARKET PRICE) APPROACH

The Comparative Approach produces either (1) an estimate of the price obtainable in the open market for the property under appraisal or (2) estimates of such matters as the relative desirability of the property under appraisal, its total rental value or the rental values of its individual units, costs of various items entering into the operation and management of the property, etc.

In cases where the properties involved are of a type such that direct comparisons between properties of the same use-types are feasible, the Comparative Approach utilizes sales prices for the purpose of estimating market price obtainable for the property under consideration. In the case of large apartment properties, hotels, and office buildings, such direct comparisons are generally impossible. In these instances the Comparative Approach involves the comparison of individual features or elements of the properties of the same use-type so that conclusions may be drawn for the property under appraisal with regard to matters concerning which estimates must be made in the Capitalization of Net Income Approach.

Frequently sales prices of improved properties may be analyzed by means of the Comparative Approach for the purpose of reaching a conclusion as to the value of parcels of land upon a comparative basis.

From the foregoing it should be evident that the Comparative Approach deals mainly with the estimate of the buying public in regard to rental values and property values. It is apparent, therefore, that any conclusions derived from the use of this approach are entitled to careful consideration. It is recognized, of course, that the public viewpoints as evidenced by sales, listing prices, and offers are frequently erroneous. For this reason the conclusions produced by means of this approach must always be questioned and verified as being correct before they can be accepted as dependable indicators of value.

THE CAPITALIZATION OF NET INCOME APPROACH

This approach must be utilized in connection with the appraisal of all investment types of real estate. These types of property are valuable only because of their present and prospective ability to produce net income. Obviously, then, the most important considerations in the valuation of these properties are related to:

1. The probable rate at which net income will be produced.
2. The probable time period during which net income will be produced.
3. The relative certainty of the continuity as to time and amount of net income.

Because of possible errors entering into the estimates relating to net income, it is usually desirable and sometimes essential that the conclusions produced by the Capitalization of Net Income Approach be considered in the light of those produced by means of the other approaches. In cases

where the estimates relating to income are known to be subject to a relatively great degree of error, less reliance can be placed upon the Capitalization of Net Income Approach than in other instances.

There are several alternate techniques which may be utilized in applying this approach. These may be designated as follows:

1. The Land-Earnings-Residual Variation.
2. The Building-Earnings-Residual Variation.
3. The Land Reversion Variation.

To illustrate these three techniques, let us assume that an appraiser has gathered information relating to a store building, as follows:

DATA SCHEDULE

Building Cost, new		$40,000.00
Effective Gross Income (i.e., after deduction for vacancy and collection losses) ensuing year		17,000.00
Deductions from effective gross income:		
(a) Operating Expenses, including repairs, management costs, and fixed charges	$5,000.00	
(b) Reserve for Replacements	800.00	
		$5,800.00
Estimated Net Income ensuing 12 months before provision for the return of capital		$11,200.00
Estimated Economic Life of Building		35 years
Average rate of depreciation for 35-year economic life period, per year		2.86%
Capitalization rates to be used:		
Overall rate		8%
Split rates:		
Land		7%
Building		8%

ILLUSTRATION NO. 1

Land-Earnings-Residual Variation
Straight-Line Depreciation
Split Capitalization Rates

Problem: To complete land value indicated by capitalization

Estimated Net Income, ensuing 12 months		$11,200.00
Earnings imputable to building:		
Amortization of building cost (assumed to equal value) in order to offset future depreciation (Straight-line Basis)— 2.86% x $40,000	$1,144.00	
Interest on building cost— 8% x $40,000	3,200.00	
Total Net Earnings imputable to building		4,344.00
Earnings imputable to land		$ 6,856.00
Capitalized value of land earnings, i.e., Indicated Capitalized Land Value (6,856÷7%), approximately		98,000.00
Building value		40,000.00
Total indicated capitalized value of property		$138,000.00

In the illustration above it is seen that the earnings imputable to the land are a residue left over after deducting from expected gross income all items of cost entering into the operation and management of the property and, in addition, the earnings imputable to the building upon the basis of the replacement cost of the latter.

The purpose of this illustration, as well as those which follow, is solely to illustrate the technique. The reliability and significance of the results produced vary under different sets of circumstances. It is not the purpose of this paper to go into this matter. It is appropriate, however, to point out here that the Land-Earnings-Residual type of capitalization analysis is not applicable in cases where under-improvement, over-improvement, or misplacements of improvements exist.

ILLUSTRATION NO. 2

Building-Earnings-Residual Variation

Straight-Line Depreciation

Split Capitalization Rates

Problem: To compute building value indicated by capitalization

Estimated Net Income, ensuing 12 months		$11,200.00
Net Earnings imputable to land— 7% x $98,000		6,860.00
Net Earnings imputable to building		4,340.00
Capitalization Factor applicable to building earnings:		
Interest upon capital value	8%	
The yearly rate of amortization to offset future depreciation (Straight-line basis)	2.86%	
Capitalization factor	10.86%	
Capitalized value of building earnings, i.e., Indicated Capitalized Value of building ($4,340 ÷ 10.86%), approximately		40,000.00
Land value		98,000.00
Indicated capitalized value		$138,000.00

It is seen that in Illustration No. 2 the amount of net earnings attributed to the building is the residue remaining after deducting from expected gross income all items of expense, operation, and management in connection with the property and, in addition, a fair return upon the land value assigned. This variation of the Capitalization of Net Income technique is particularly applicable in cases involving structures in mid-life and late life and in cases involving new structures or those in early life when such buildings are not proper improvements for their sites.

In the foregoing illustrations, different rates of capitalization are applied to the earnings imputable to land and those imputable to buildings. Such rates are spoken of as "split" rates. It will be found upon analysis that the valuation of $138,000 reflects an overall capitalization rate (giving effect to the economic life estimate relating to the building) of approximately 7.29 per cent. The illustrations could just as well have been presented by making use of a single capitalization rate, i.e., an overall rate. It is apparent, therefore, that either split rates or overall rates may be utilized in the so-called Land-Earnings-Residual or Building-Earnings-Residual Variations. An overall rate is used to illustrate the point in Illustration No. 3.

Illustrations No. 1 and No. 2 make use of the premise that future depreciation will occur in equal yearly amounts of one-thirty-fifth of the value attributed to the building. There are several other premises upon which the estimates could have been based in so far as providing offsets for anticipated depreciation are concerned. One of these is shown in Illustration No. 3, in which building earnings are capitalized upon the basis that their future trend will be gradually downward and be equivalent to Frederick M. Babcock's income premise No. 2.

ILLUSTRATION NO. 3[1]

Building-Earnings-Residual Variation

Declining Income Premise (Babcock's Premise No. 2)

Overall Capitalization Rate

Problem: To compute building value indicated by capitalization

Estimated Net Income, ensuing 12 months		$11,200.00
Net Earnings imputable to land— 8% x $98,000		7,840.00
Net Earnings imputable to building		$ 3,360.00
Capitalization Factor applicable to building earnings: Present value factor, 35 yrs. (economic life of building), 8% rate, Babcock's premise No. 2—10.4229		
Capitalized value of building earnings, i.e., indicated capitalized value of building ($3,360 x 10.4229), approximately		$ 35,000.00
Land Value		98,000.00
Indicated Capitalized Value		$133,000.00

Illustration No. 3 is inconsistent with No. 1 and No. 2 in that it assumes the same land value as in the other illustrations but requires greater land earnings to justify this value. In No. 3, the land earnings are

[1]In Illustration No. 3 the present value factor used is taken from Table II, Premise 2, of "Valuation of Real Estate" by Frederick M. Babcock, M. A. I. Factors in the table named give the discounted worth of a series of progressively declining incomes for a selected number of years beginning at the end of the first year. The successive installments of income decline proportionately to the corresponding yearly values of a level annuity at a ten per cent rate for the same number of years selected for the income series.

seen to be $7,840 on a $98,000 value, while in No. 1 and No. 2 the land earnings are $6,860 on the same value of $98,000. Therefore, if the principle that lower rates of return (i.e., capitalization rates) are more applicable in estimating or justifying land values than in estimating or justifying building valuations, then there is something of unsoundness in Illustration No. 3. However, the illustration is given merely to show how an overall capitalization rate can be used in either a land-earnings-residual or building-earnings-residual capitalization analysis.

Illustration No. 4 shows the third alternate capitalization technique, designated here as the "Land Reversion Variation" because the outstanding difference between this technique and the other two is that the land in this case is treated as a reversion, whereas in the other techniques, the land is assigned a definite value as of the time of appraisal.

ILLUSTRATION NO. 4

Land Reversion Variation
Net Income Treated as a Level Annuity
Overall Capitalization Rate

Problem: To compute indicated capitalized value of the property

Net Income, ensuing 12 months	$11,200.00
Present Value of Property Earnings for economic life of building:	
Present Value Factor, 35-year period, 8% rate (from "Present Value of One Per Annum" table) 11.655	
Value of annuity—11.655 x $11,200 (approximately)	130,500.00
Present Value of Land Reversion:	
Assumed Land Value at expiration of economic life of building	$98,000.00
Present value of $1.00 payable 35 years hence, 8% rate (from "Present Value of One" table) .0676	
Value of land reversion—.0676 x $98,000 (approximately)	6,600.00
Indicated capitalized value of property	$137,100.00

In Illustration No. 4 it is seen that the earnings of the property during the term of expected economic life of the buiding are treated as a unit and are valued by means of the application of a present value factor. The value that may reside in the property at the expiration of the economic life of the building is treated as a reversion and is also valued as of the time of appraisal by means of a present value factor. Since but a single capitalization rate is used, the valuation reflects an overall rate of eight per cent.

The Land Reversion Variation is applicable in any case regardless of whether the structure involved is new, in mid-life, or in late life. It is rather obvious, however, that it is useful to the greatest advantage in the late life cases when a fairly reasonable basis may exist for the estimation of the value of the land reversion.

It will be seen that if a single rate of capitalization is used in connection with the Land-Earnings-Residual or Building-Earnings-Residual Variations, the results obtained will be equally as worthy of reliance as a result produced by means of the Land Reversion Variation. Furthermore, the first two variations which have been presented enable a distribution of the total valuation between land and buildings upon the basis of earnings imputed to them, whereas the Land Reversion technique does not provide any basis for a distribution of the total value estimate.

PURPOSES WHICH EACH TECHNIQUE IS PECULIARLY WELL ADAPTED TO SERVE

The three techniques discussed in this paper are peculiarly adapted to serve different purposes in some instances. Some of these are listed below:

Land-Earnings-Residual Process:

Best adapted to serve the following purposes:

1. To estimate the value attributable to the land in the case of an improved property.
2. To estimate the potential capitalized value of a vacant site if and when improved as per an assumed and specific program of utilization.

3. To discover whether or not existing improvement is improper or is an over-improvement or an under-improvement of the site.

Building-Earnings-Residual Process:

Best adapted to serve the following purposes:

1. To estimate the value attributed to a building.
2. To discover whether or not economic life of building has terminated.

Land-Reversion-Process:

Best adapted to serve the following purpose:

1. To estimate the value of a leased fee.

WHEN THE SEVERAL TECHNIQUES ARE APPROPRIATE OR INAPPROPRIATE

The statements below indicate a number of particular instances in which the several techniques are or are not appropriate.

Land-Earnings-Residual Process:

A. Appropriate for use in:

1. Cases of new buildings which represent the proper site utilization and which are not much more valuable than the site.
2. Cases of vacant sites (useful as an evidence, although an unreliable one, of probable land value).
3. Cases of improved leaseholds with new buildings in which the value of the leasehold exceeds the cost of building improvements.

B. Inappropriate for use:

1. When land value is but a small portion of total value of the improved property (except to obtain an unreliable estimate of the probable land value or for use in checking an estimated land value made independently).
2. When the building on the site is not new or nearly new.
3. When the building is not a proper improvement for the site.

Building-Earnings-Residual Process:

A. Appropriate for use in:

1. All cases of buildings which are not new or nearly new.
2. Cases of buildings which are not proper improvements for the site.

B. Inappropriate for use:

1. When buildings are new or nearly new and represent the highest and best site utilization (except in such cases in which it may be used as a check on results produced by the other techniques).

Land-Reversion Process:

A. Appropriate for use in:

1. Any case in which the economic life of the building has terminated or nearly terminated.
2. Any case in which the problem does not involve determination as to whether or not the building is a proper improvement for the site.
3. Cases of improved leaseholds with new or nearly new buildings in which the value of the leasehold is less than the cost of building improvements.

B. Inappropriate for use:

1. If the problem requires estimation of land building value as of time of appraisal.
2. If the problem requires estimation of building value as of time of appraisal.
3. If the problem requires determination as to whether or not the building is a proper improvement for the site.

Thus, it is seen that all three techniques are of use in solving appraisal problems. Frequently all three of them can be used to advantage in a particular case. Appraisers should be familiar with all of them and understand the principles underlying each of them so as to recognize the significance of the results they produce, otherwise judgment may be led astray and soundness sacrificed.

Relation of Owner-Occupied Residential Property Value To Family Income[1]

By S. L. KEDZIERSKI

ABILITY to handle the carrying charges without jeopardizing the equity is one of the prime factors in home ownership. It is not enough to say that any one who is planning to purchase a home today must advance cash or equivalent thereof, as initial payment, for at least twenty per cent of the property value. There are many other factors besides initial equity in the house to be considered.

In addition to the original purchase price, the initial down payment, the financing charges, and other costs of ownership, such as taxes, supplementary expenditure of transportation, and annual taxes and assessments upon land improvements, account for a substantial part of the total cost of home ownership. Apparent annual loss of value due to obsolescence and depreciation, together with maintenance cost and repairs, is likewise of paramount importance in the purchase of a home.[2]

While the various elements of cost are always present in the mind of the prospective buyer, they enter into the calculation of individuals in varying degrees and at different periods of time. When the need for improvement or modernization is urgent and particularly when the economic outlook of the home owner is reasonably assured, there is a tendency for individuals to minimize these factors. To underestimate these factors often invites serious embarrassment to the home owner, and, according to many realty operators, inability to support home ownership eventually leads to property abandonment.

FAMILY INCOME RELATED TO VACANCIES

The Real Property Inventory of sixty-four cities has shed some light on how reduction of family income causes dwelling vacancies.[3] This is shown in Figure 1. All vacant dwelling units were recorded as rental units by the Real Property Inventory, irrespective of whether they may be ultimately rented or sold. This arrangement was made necessary to keep clear the classification of owner-occupied houses.

On the average, the vacancy ratio for each rental group varied considerably from 10.9 per cent for the $30-$50 group to 32.0 per cent for $100-and-over rental group. It is striking to note that the ratio showed a steady ascendancy with a sharp increase for the $75-$100-and-over rental group.

There is an important point to be observed in this connection. It is apparent that the high vacancy ratio in the highest rental class probably can be ascribed to the diminution of family income of occupants in these dwellings during the depression, thus compelling them to move to living quarters where rents were more commensurate with the family's revised budget.[4] Obviously, wholesale abandonment of dwellings for various reasons is bound to increase the supply of empty houses on the market which will not only

[1] The term "owner-occupied" means that the family owns the unit it occupies, regardless of the debt status of the structure. For definition of family income, see page 157 of this article.

[2] It will be observed that the writer in this connection used "apparant" rather than "actual" loss of value due to obsolescence and depreciation largely because in many instances the home owner considers his property as a place to live for a substantial period of time. So long as he is not forced to sell or compelled to vacate for various reasons, the value of the property to him will often be the original purchase price.

[3] Since income data were not requested on the Real Property Inventory (although they were collected by the *Financial Survey of Urban Housing*), rent figures are substituted here, as there is a high coefficient of correlation (r=.96) between income groups and monthly rental rate groups. See *Markets for Plumbing and Heating Facilities in Residences, Market Research Series No. 12*, Marketing Research Division, Bureau of Foreign and Domestic Commerce, Washington, D. C. Price 10 cents. Figure 1, page 34.

[4] In the extremely low rental classes the relatively high vacancy ratio is probably due to poor housing conditions resulting from dwellings needing major repairs or unfit for habitation. For further details on this subject reference is made to *Markets for Plumbing and Heating Facilities in Residences, Market Research Series No. 12*, Marketing Research Division, Bureau of Foreign and Domestic Commerce Washington, D. C. Price 10 cents.

deter new building but cause property values to fall and eventually precipitate an economic paralysis in the building industry. While permanent stability in the building industry is seldom attained, these adverse forces can be minimized to a degree.

A CRITERIA FOR HOME BUYERS

One probable method to counteract such possible tendencies in the future is to ascertain a reasonable criteria of purchase price for prospective home owners. In a large measure, and apart from the type of financing arrangement made to amortize the debt and pay off interest, proper balance between family income and initial cost of residential property is a secure way toward eventual home ownership.

The statistics in this study, which show the relationship between property value and family income (based upon data compiled from the *Financial Survey of Urban Housing)*, share the common limitation of all real property inventory collected in 1934 when economic conditions in the United States were such as slightly to deflect normal relationships between property values and family incomes.[5] Apart from such limitations, as measured by a statistical device shown in Tables 2A and 3A, it is believed the diagrams and tables purport to serve as a general yardstick for those who are planning to buy a home.

On the average, for all incomes combined, when a family buys a home in which to live, it acquires the property for a price equivalent to about three times family income, according to an analysis of data obtained from the *Financial Survey of Urban Housing* in fifty-two cities, taken in 1934.[6]

[5] For more detailed information on limitation of sampled Real Property Inventory data, see final publication of *Financial Survey of Urban Housing*, a CWA project conducted by the Department of Commerce under the general direction of Dr. N. H. Engle, Assistant Director of the Bureau of Foreign and Domestic Commerce, and under immediate supervision of David L. Wickens.

[6] For the purpose of the *Financial Survey of Urban Housing*, one, two, or three cities were selected from each state, these specific cities having been chosen because of their distinctive characteristics as to location, age, size, rate of growth, and industrial development. This survey covers only urban residential properties and does not include hotels, lodging or rooming houses, clubs, or summer cottages. In selecting the sample in each of the fifty-two cities, every tenth dwelling unit of the city, as presented on the schedules of the Real Property Inventory, was taken for the survey.

While the average ratio for fifty-two cities was 3.1, it varied considerably by income ranges and geographical divisions. The ratio of average owner-occupied value of property to family income varies inversely with income; that is to say, it tends to diminish with every successive increase in family income, but the rate of diminution is not constant throughout the income range. (See Figure 2.)

GEOGRAPHICAL SIGNIFICANCE

It is interesting to observe that the shape of the curve or line which shows value of property purchased, expressed as multiples of family income, assumes the same pattern in all the geographical divisions studied, but not necessarily on the same level.[7] Nevertheless, in each case, on the average, the ratio is greatest in the lowest income groups and declines most rapidly up to family incomes of $2,000 per annum. From approximately this level to the highest average income, the value of property expressed as a multiple of income tends to diminish at about the same rate. For example, in New England, (reading from Figure 2) home owners with a family income of $1,000 reported the value of their property at about five and one-half times their family income, but those with a family income of $5,000 indicated the value of their property at a rate of about two times their income.

Too much reliance cannot be placed on the figure for family income under $500 because, in the first place, such incomes could not support property ownership, and, in the second place, many persons who reported were either not employed or probably on part time work or relief rolls at the time this census was taken. Obviously, such ratios would be misleading.

The market value of owner-occupied property, including land and improve-

[7] It is interesting to observe in this connection that the curve showing the relation between rent and family income assumes the same shape as the one in Figure 2, based upon the *Financial Survey of Urban Housing*. For further details see *"Relationship between Rent and Family Income,"* in Domestic Commerce, Oct. 20, 1935, published by the Bureau of Foreign and Domesic Commerce, Washington, D. C.

ments, was a conservative estimate made by the owner in January, 1934, when these data were collected. Family income was the total income reported by the family for the year from wages or salary and all other sources, such as investments, profits from business, and receipts from boarders and roomers. These figures, for fifty-two cities, were correlated with family income for 1933 and expressed, not in dollars or percentages, but rather in terms of the multiples of family income. By using such methods, one can work out a reliable index to gauge about how much a prospective buyer should pay for his home. Naturally, this assumption is made on the proposition that the *Financial Survey of Urban Housing* provided adequate data upon which to base such contention.

These diagrams and supporting tables purport to serve as a yardstick, though not too rigid, for those who are thinking of buying a home, for real estate dealers, for architects, for builders, and for others engaged in the building construction industry.

EFFECT OF CITY SIZE

Table 2 shows the estimated market value of property, expressed as multiples of family income, for fifty-two selected cities arranged by geographical divisions. It will be observed from this table that the city ratios deviate somewhat from the geographical division ratio in each family income bracket. However, the greatest variations appear in the extreme low income brackets.

In every city the ratio changes, from the lowest income brackets to the highest, and produces the same pattern or shape of the curve as indicated by geographical divisions in Figure 2.

It is striking to observe that the ratio of property values to family incomes in practically every income bracket is higher in New England, Middle Atlantic, and East North Central than in the other geographical divisions. With few exceptions, the East South Central and the West South Central divisions tend to show smaller ratios in question in the first six income groups than corresponding groups in other divisions. Apart from these sectional differences, the ratios in the last four income brackets in each geographical area deviate slightly from the United States average.

Table 3 shows the estimated market value of property expressed as multiples of family income by size of city. Apparently there is no definite relationship between the city-size group and the ratio of property value to family income. The pattern or shape of the curve here (Figure 3), however, is exactly the same as that shown for geographical divisions (Figure 2). However, there is one important observation in this connection worthy of mention. The largest city-size group shows greater ratios in question throughout the series than any other population group, whereas the reverse holds true for the smallest cities enumerated in the *Financial Survey of Urban Housing*.

METHOD OF PROCEDURE

The observations which are designated by the dots in Figures 2 and 3, to determine the course of the line drawn freehand, were determined as follows: the total dwelling units reporting average family income and average value of property were classified according to the range of family income; the total dwelling units with the corresponding property values were summarized for each city, arranged according to geographical divisions, and then averaged; similarly, total dwelling units with corresponding family income were classified by income classes, then averaged. The figures in the diagram which are represented by the vertical scale were obtained by dividing the total value of property reported by the average annual family income. This was done for each family income class. For example, in the New England cities the calculations were as shown in the table on the following page.

INCOME GROUPS RANGING FROM $1,000 TO $1,499

City	Number Families Reporting	Total Annual Family Income	Average Annual Family Income Reported	Total Value Property Reported	Average Value of Property	Ratio of Property Value to Family Income (Multiple of Income)
	1	2	3	4	5	6
Portland, Maine	259	$307,600	$1,188	$1,358,300	$5,244	4.4
Providence, R. I.	608	725,900	1,194	3,530,800	5,807	4.9
Waterbury, Conn.	108	129,900	1,203	764,900	7,082	5.9
Worcester, Mass.	247	305,900	1,238	1,473,400	5,965	4.8
Total	1,222	$1,469,300	$1,202	$7,127,400	$5,832	4.9

Similar calculations were made for all other geographical divisions. The data in columns three and six were plotted on Figure 2. The same data, that is, the figures in columns three, five, and six, were rearranged by city-size groups to show average family income and average property value by income classes. In each, the "no income" group was deleted in the calculations. The ratio of property value to family income expressed in multiples of income was then recalculated. This is shown in Figure 3. This method of procedure in each case automatically gives proper weight of reported dwellings in each city. The calculations are not averages of averages.

After these ratios were charted, the curve line moving downward from left to right was drawn by free-hand method. The line was not fitted mathematically, but in either case, because of the high degree of correlation, the results would be approximately the same.

GEOGRAPHICAL REPRESENTATIVENESS OF THE SAMPLE

Certain variations in the ratio of the value of property expressed in terms of multiples of family income are to be expected. A fully representative sample should include data reported for practically all cities in a given area where these variations occur. The *Financial Survey of Urban Housing* covered approximately a fifteen per cent sample of total dwellings in fifty-two cities. Some geographical areas covered but four cities of varying sizes, but many of them covered at least six or more, one section including ten urban communities.

There is a further discrepancy in the data in that adequacy of sample by some income groups is not too satisfactory. This is largely exemplified by the high variability of ratios by cities in the extremely low family income brackets. A larger number of reports from the two lowest income brackets doubtless would provide greater stability in the average ratio in these groups. Apart from the inadequacy of the sample in the $1.00 to $250 and the $250 to $500 income groups, the sample tends to be slightly distorted because in the period studied, 1933 (the depth of the depression), many people who were either thrown out of work or partially employed fell into these two income classes, otherwise they probably would have been placed in higher brackets.

Another possible source of error is in the uneven range of income bracket. The spread tends higher in the last three classes. Obviously, such a classification tends to introduce higher variability in the ratio. Furthermore, many of the incomes reported were so low that they would not support ownership of property. Therefore, caution should be exercised when the ratios in the two lowest income brackets are used.

With some idea of the variability in the ratio of property value to family income,

(Continued on page 168.)

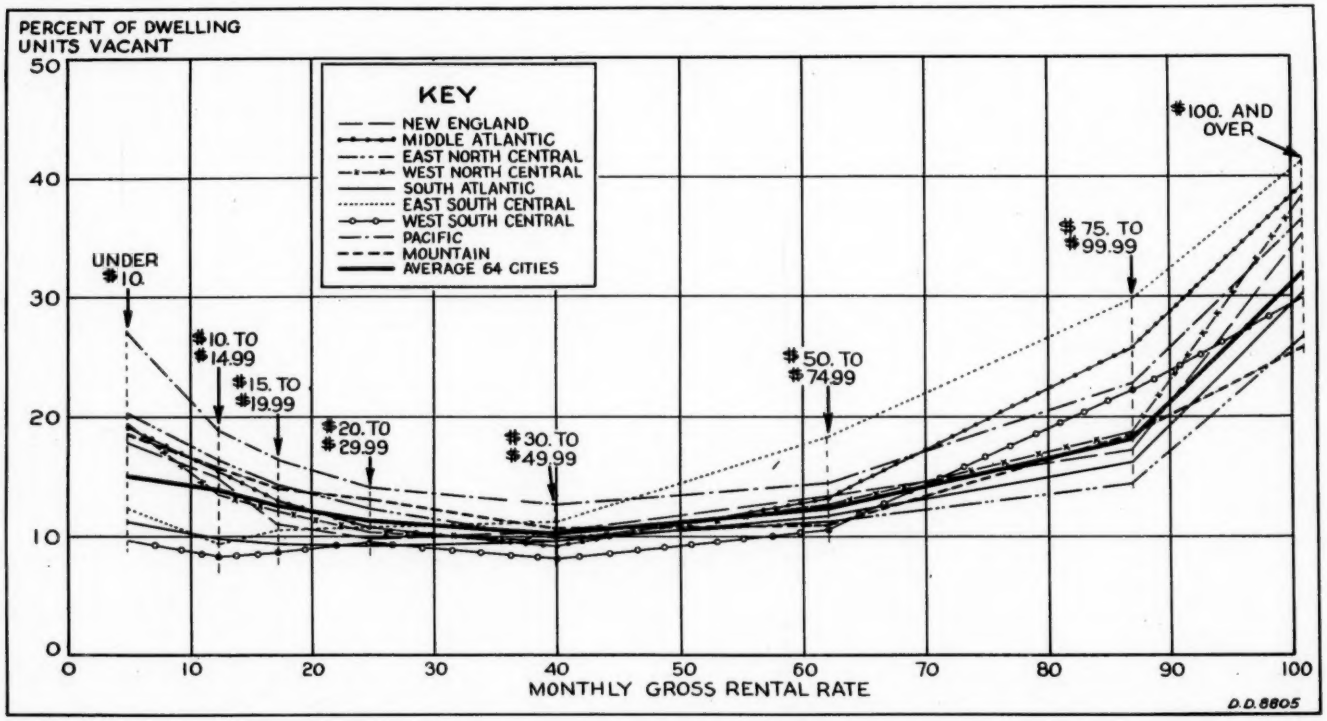

FIGURE 1—DISTRIBUTION OF VACANT DWELLING UNITS BY MONTHLY GROSS RENTAL RATE GROUPS FOR 9 GEOGRAPHICAL DIVISIONS AND AVERAGE FOR 64 CITIES

Prepared by Wholesale Trade Section
Marketing Research Division
Bureau of Foreign and Domestic Commerce

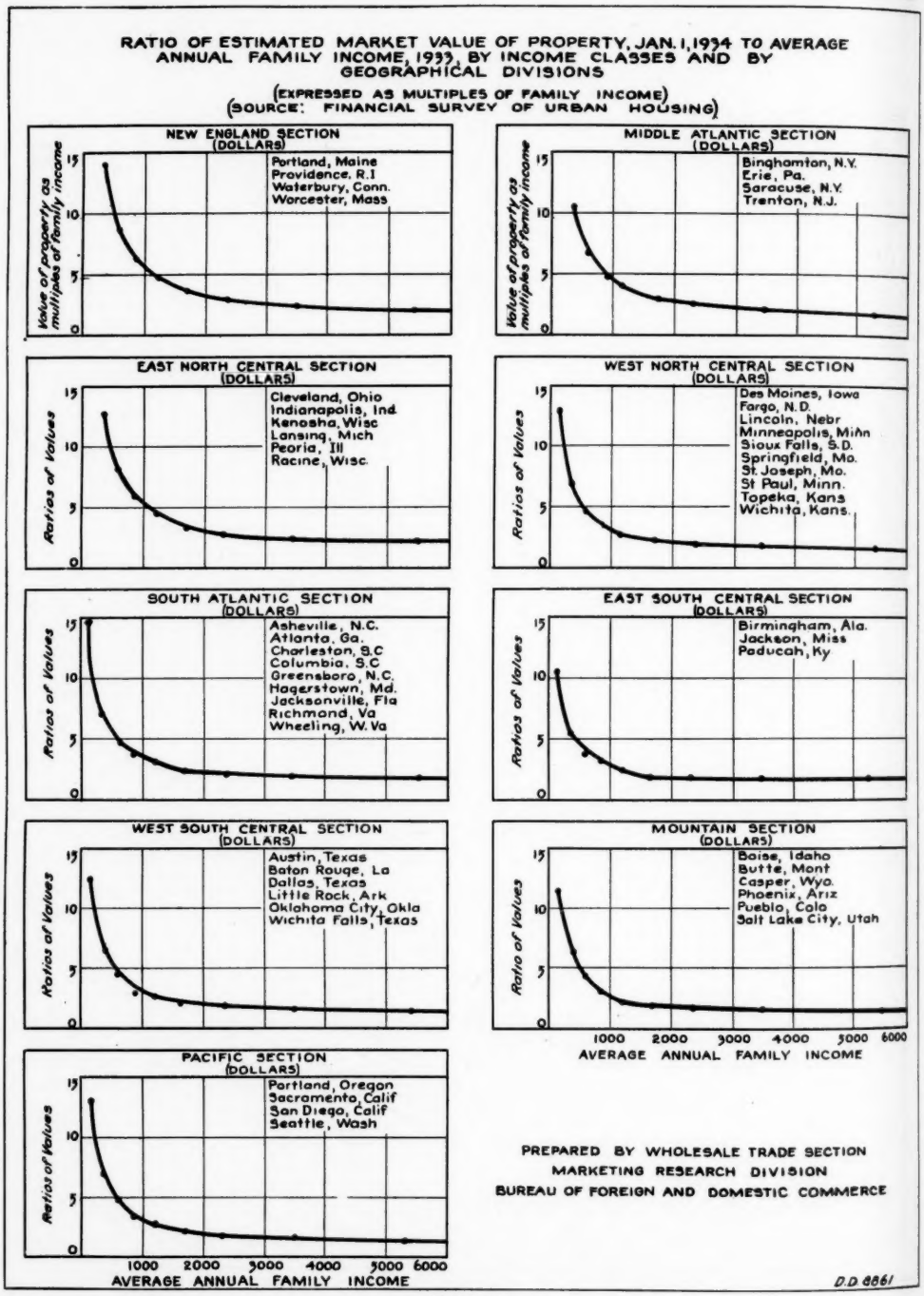
RATIO OF ESTIMATED MARKET VALUE OF PROPERTY, JAN. 1, 1934 TO AVERAGE ANNUAL FAMILY INCOME, 1933, BY INCOME CLASSES AND BY GEOGRAPHICAL DIVISIONS
(EXPRESSED AS MULTIPLES OF FAMILY INCOME)
(SOURCE: FINANCIAL SURVEY OF URBAN HOUSING)
NEW ENGLAND SECTION (DOLLARS)
Portland, Maine
Providence, R.I
Waterbury, Conn.
Worcester, Mass
MIDDLE ATLANTIC SECTION (DOLLARS)
Binghamton, N.Y.
Erie, Pa.
Saracuse, N.Y.
Trenton, N.J.
EAST NORTH CENTRAL SECTION (DOLLARS)
Cleveland, Ohio
Indianapolis, Ind.
Kenosha, Wisc
Lansing, Mich
Peoria, Ill
Racine, Wisc.
WEST NORTH CENTRAL SECTION (DOLLARS)
Des Moines, Iowa
Fargo, N.D.
Lincoln, Nebr
Minneapolis, Minn
Sioux Falls, S.D.
Springfield, Mo.
St. Joseph, Mo.
St Paul, Minn.
Topeka, Kans
Wichita, Kans.
SOUTH ATLANTIC SECTION (DOLLARS)
Asheville, N.C.
Atlanta, Ga.
Charleston, S.C
Columbia, S.C
Greensboro, N.C.
Hagerstown, Md.
Jacksonville, Fla
Richmond, Va
Wheeling, W.Va
EAST SOUTH CENTRAL SECTION (DOLLARS)
Birmingham, Ala.
Jackson, Miss
Paducah, Ky
WEST SOUTH CENTRAL SECTION (DOLLARS)
Austin, Texas
Baton Rouge, La
Dallas, Texas
Little Rock, Ark
Oklahoma City, Okla
Wichita Falls, Texas
MOUNTAIN SECTION (DOLLARS)
Boise, Idaho
Butte, Mont
Casper, Wyo.
Phoenix, Ariz
Pueblo, Colo
Salt Lake City, Utah
PACIFIC SECTION (DOLLARS)
Portland, Oregon
Sacramento, Calif
San Diego, Calif
Seattle, Wash
Value of property as multiples of family income
Ratios of Values
Ratio of Values
0
5
10
15
1000 2000 3000 4000 5000 6000
AVERAGE ANNUAL FAMILY INCOME
PREPARED BY WHOLESALE TRADE SECTION
MARKETING RESEARCH DIVISION
BUREAU OF FOREIGN AND DOMESTIC COMMERCE
D.D. 8861

FIGURE 2.

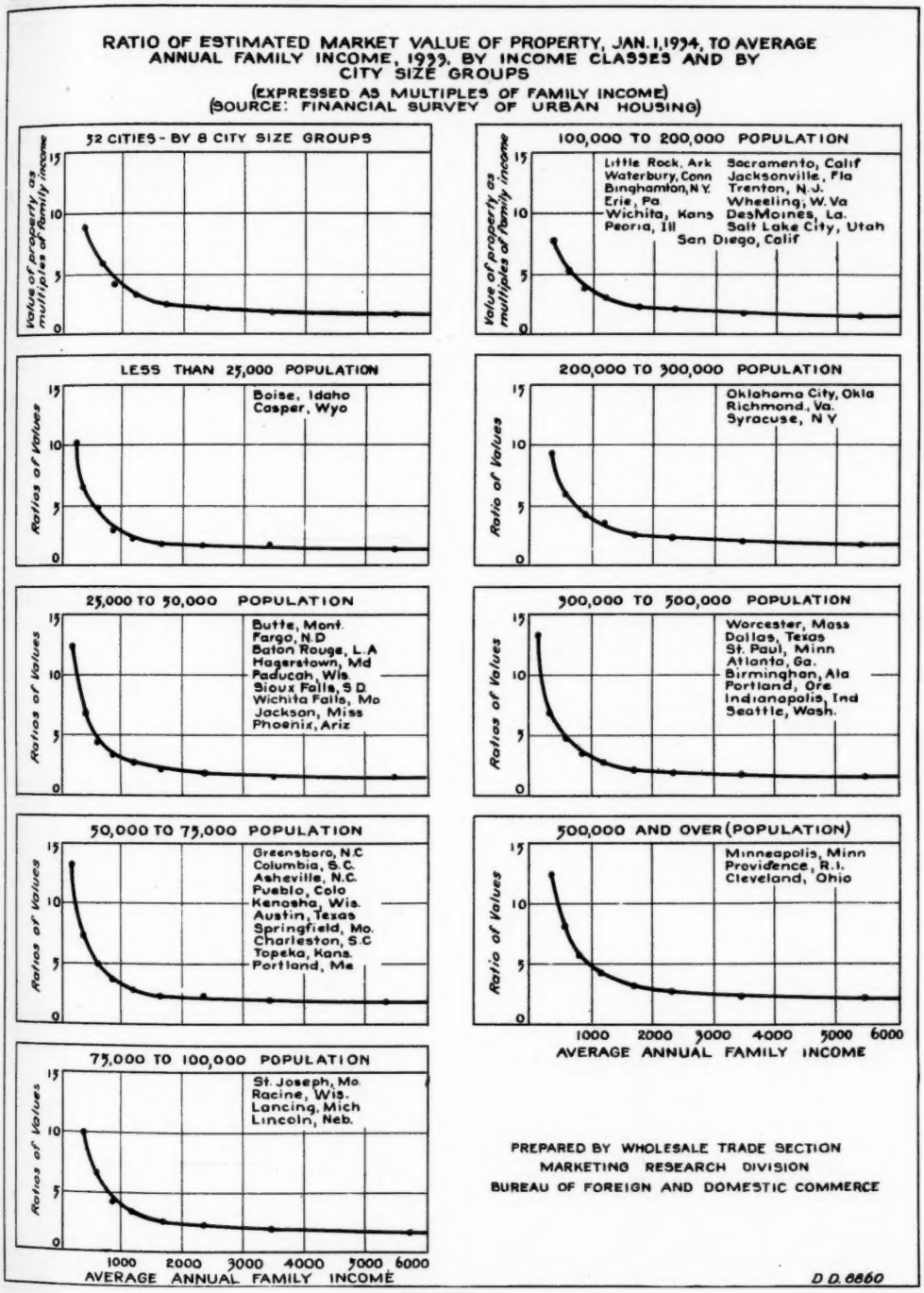
RATIO OF ESTIMATED MARKET VALUE OF PROPERTY, JAN. 1, 1934, TO AVERAGE ANNUAL FAMILY INCOME, 1933, BY INCOME CLASSES AND BY CITY SIZE GROUPS
(EXPRESSED AS MULTIPLES OF FAMILY INCOME)
(SOURCE: FINANCIAL SURVEY OF URBAN HOUSING)
32 CITIES - BY 8 CITY SIZE GROUPS
Value of property as multiples of family income
100,000 TO 200,000 POPULATION
Little Rock, Ark
Waterbury, Conn
Binghamton, N.Y.
Erie, Pa.
Wichita, Kans
Peoria, Ill
Sacramento, Calif
Jacksonville, Fla
Trenton, N.J.
Wheeling, W.Va
DesMoines, Ia.
Salt Lake City, Utah
San Diego, Calif
LESS THAN 25,000 POPULATION
Boise, Idaho
Casper, Wyo
Ratios of Values
200,000 TO 300,000 POPULATION
Oklahoma City, Okla
Richmond, Va.
Syracuse, N.Y.
Ratio of Values
25,000 TO 50,000 POPULATION
Butte, Mont.
Fargo, N.D.
Baton Rouge, La.
Hagerstown, Md
Paducah, Wis.
Sioux Falls, S.D.
Wichita Falls, Mo
Jackson, Miss
Phoenix, Ariz
300,000 TO 500,000 POPULATION
Worcester, Mass
Dallas, Texas
St. Paul, Minn
Atlanta, Ga.
Birmingham, Ala
Portland, Ore
Indianapolis, Ind
Seattle, Wash.
50,000 TO 75,000 POPULATION
Greensboro, N.C.
Columbia, S.C.
Asheville, N.C.
Pueblo, Colo
Kenosha, Wis.
Austin, Texas
Springfield, Mo.
Charleston, S.C.
Topeka, Kans.
Portland, Me
500,000 AND OVER (POPULATION)
Minneapolis, Minn
Providence, R.I.
Cleveland, Ohio
75,000 TO 100,000 POPULATION
St. Joseph, Mo.
Racine, Wis.
Lansing, Mich
Lincoln, Neb.
0 5 10 15
1000 2000 3000 4000 5000 6000
AVERAGE ANNUAL FAMILY INCOME
PREPARED BY WHOLESALE TRADE SECTION
MARKETING RESEARCH DIVISION
BUREAU OF FOREIGN AND DOMESTIC COMMERCE
D.D. 8660

FIGURE 3.

TABLE 2—RATIO OF ESTIMATED MARKET VALUE OF PROPERTY, JANUARY 1, 1934, TO AVERAGE ANNUAL FAMILY INCOME, 1933, BY INCOME CLASSES FOR 52 CITIES AND GEOGRAPHICAL DIVISIONS

(Figures expressed in multiples of income)

Geographical Division and Cities	No. of family units reporting	All Incomes	Family Income Groups, 1933									
			$1 to 249	$250 to 499	$500 to 749	$750 to 999	$1,000 to 1,499	$1,500 to 1,999	$2,000 to 2,999	$3,000 to 4,499	$4,500 to 7,499	$7,500 and over
Total	122,429	3.1	17.5	8.9	5.9	4.2	3.4	2.6	2.3	2.0	1.8	1.3
New England	6,362	3.7	28.3	14.1	8.7	6.3	4.9	3.6	3.0	2.4	2.0	1.1
Portland, Maine	1,366	3.3	25.3	12.2	8.4	5.7	4.4	3.4	2.8	2.3	1.7	1.2
Providence, R. I.	3,125	3.9	28.3	13.6	8.0	6.1	4.9	3.6	3.1	2.4	2.2	1.2
Waterbury, Conn.	564	3.9	29.5	16.7	10.7	7.1	5.9	4.2	3.4	3.0	2.3	1.5
Worcester, Mass.	1,307	3.6	30.3	16.1	9.8	7.1	4.8	3.8	3.0	2.3	1.9	1.3
Middle Atlantic	6,978	3.9	23.9	10.6	6.8	4.8	4.0	3.0	2.6	2.1	1.8	1.2
Binghamton, N. Y.	560	5.1	33.0	12.8	8.7	5.8	4.3	3.7	3.1	2.2	1.8	1.0
Erie, Pa.	2,933	4.4	24.0	10.6	7.1	5.1	4.0	2.7	2.5	2.2	1.8	1.3
Syracuse, N. Y.	1,262	4.1	29.3	13.8	9.0	5.8	4.8	3.7	3.1	2.3	2.1	1.0
Trenton, N. J.	2,223	3.4	20.2	8.6	5.2	4.0	3.4	2.6	2.2	1.8	1.7	1.5
East North Central	30,808	4.3	26.6	12.7	8.2	5.9	4.5	3.3	2.9	2.5	2.3	1.7
Cleveland, Ohio	20,999	4.5	28.1	13.4	8.8	6.0	4.9	3.6	3.2	2.7	2.5	1.8
Indianapolis, Ind.	2,552	2.7	18.2	8.8	5.8	4.0	3.4	2.5	2.2	2.0	1.7	1.4
Kenosha, Wis.	1,100	5.4	24.9	13.3	8.3	5.7	4.2	3.3	2.5	2.6	2.1	-
Lansing, Mich.	1,111	3.2	17.8	8.5	5.7	3.7	3.5	2.4	2.0	1.7	1.9	0.5
Peoria, Ill.	2,618	3.1	18.6	9.3	5.8	4.0	3.5	2.7	2.5	2.1	1.8	1.2
Racine, Wis.	2,428	5.8	29.4	13.3	8.7	5.7	4.4	3.5	2.8	2.4	1.2	1.4
West North Central	23,489	2.6	13.0	6.8	4.7	3.5	2.8	2.3	2.0	1.8	1.6	1.1
Des Moines, Iowa	3,236	2.2	9.7	5.8	3.9	3.0	2.4	2.1	1.8	1.6	1.4	0.9
Fargo, N. D.	817	3.0	22.9	7.7	5.6	4.4	3.7	2.7	2.4	2.2	1.7	0.9
Lincoln, Nebr.	1,623	2.6	11.6	6.3	5.1	3.1	2.7	2.2	2.1	1.8	1.5	1.5
Minneapolis, Minn.	7,226	2.9	16.5	8.6	5.8	4.2	3.3	2.6	2.2	1.8	1.6	1.2
Sioux Falls, S. D.	1,165	2.7	13.1	8.6	5.6	3.7	3.1	2.5	2.2	2.1	1.7	0.8
Springfield, Mo.	1,523	2.5	10.7	5.0	3.7	2.6	2.3	1.7	2.2	1.8	1.9	0.9
St. Joseph, Mo.	1,211	2.4	11.7	6.2	4.0	3.1	2.3	1.9	1.8	1.9	2.2	1.1
St. Paul, Minn.	1,850	2.6	13.9	8.0	5.0	3.8	2.9	2.4	2.0	1.6	1.4	0.9
Topeka, Kans.	2,385	2.4	12.3	6.1	4.1	3.3	2.7	2.1	1.9	1.6	1.4	0.9
Wichita, Kans.	2,453	2.2	11.2	5.1	3.8	2.8	2.1	1.7	1.6	1.5	1.3	1.1
South Atlantic	12,319	2.7	14.8	7.1	4.8	3.8	3.3	2.5	2.3	2.0	1.8	1.3
Asheville, N. C.	882	2.8	14.2	6.1	4.6	3.4	2.9	2.3	2.6	1.8	2.0	1.3
Atlanta, Ga.	4,068	2.6	11.7	5.7	4.0	3.4	2.8	2.2	2.0	1.9	1.7	1.4
Charleston, S. C.	601	2.5	8.0	5.4	4.6	3.8	2.8	2.8	2.4	2.3	2.2	0.9
Columbia, S. C.	569	2.8	11.9	7.5	5.0	4.5	3.4	2.9	2.8	1.9	1.6	0.9
Greensboro, N. C.	535	2.6	15.8	7.3	4.8	5.0	3.7	2.8	2.3	2.1	2.2	1.4
Hagerstown, Md.	702	3.8	20.7	7.9	6.5	4.8	3.7	3.4	3.0	2.3	2.0	1.8
Jacksonville, Fla.	596	3.1	13.8	7.2	5.0	4.1	3.7	2.5	2.1	2.1	1.3	0.8
Richmond, Va.	2,133	2.6	14.1	7.9	4.2	3.6	3.7	2.6	2.4	2.2	1.9	1.5
Wheeling, W. Va.	2,233	3.7	18.4	8.6	5.5	4.0	3.3	2.7	2.3	2.2	2.0	1.3
East South Central	5,065	2.6	10.6	5.5	3.9	3.3	2.6	2.0	1.9	1.7	1.7	1.0
Birmingham, Ala.	3,879	2.6	10.9	5.6	3.9	3.4	2.7	2.0	1.9	1.8	1.7	0.9
Jackson, Miss.	429	2.6	14.3	7.5	5.5	5.1	3.4	2.7	1.9	1.7	2.3	1.3
Paducah, Ky.	757	2.0	8.4	4.2	3.1	2.3	1.9	1.7	1.7	1.2	1.0	0.9
West South Central	9,932	2.3	12.4	6.5	4.6	2.9	2.7	2.1	1.9	1.6	1.5	1.0
Austin, Texas	1,036	2.5	10.8	6.0	4.1	3.1	2.9	2.4	2.2	1.9	1.6	1.2
Baton Rouge, La.	346	2.5	14.1	7.6	4.2	3.5	3.0	2.7	2.5	1.8	1.3	0.8
Dallas, Texas	3,058	2.2	16.2	6.7	5.1	2.3	2.8	2.1	1.8	1.6	1.3	0.8
Little Rock, Ark.	1,855	2.2	10.9	4.7	4.0	2.9	2.5	2.0	1.7	1.6	1.6	1.0
Oklahoma City, Okla.	2,813	2.6	12.8	8.0	5.3	3.8	3.0	2.1	2.1	1.8	1.7	1.0
Wichita Falls, Texas	824	1.7	7.2	3.8	2.6	1.7	1.9	1.5	1.7	1.0	1.6	1.1
Mountain	9,434	2.4	11.5	6.4	4.3	3.1	2.3	1.9	1.8	1.6	1.4	1.1
Boise, Idaho	1,278	2.7	11.2	6.8	5.0	3.4	2.6	2.3	1.9	1.8	1.5	1.0
Butte, Mont.	1,969	2.3	10.5	5.9	3.7	2.6	2.4	1.8	1.6	1.5	1.1	0.6
Casper, Wyo.	686	2.0	7.7	5.8	4.4	2.2	2.1	1.6	1.7	1.9	1.4	0.8
Phoenix, Ariz.	988	2.6	15.7	8.9	5.2	4.3	2.9	2.1	1.8	1.8	1.7	1.3
Pueblo, Colo.	1,019	2.0	7.1	3.9	3.2	2.2	1.8	1.4	1.2	1.1	1.1	-
Salt Lake City, Utah	3,494	2.4	14.1	7.0	4.7	3.3	2.5	2.0	1.9	1.6	1.5	1.6
Pacific	18,082	2.6	13.3	7.0	4.8	3.4	2.7	2.2	1.9	1.7	1.5	1.2
Portland, Oregon	4,830	2.6	13.1	6.6	4.7	3.1	2.5	2.0	1.8	1.7	1.4	1.2
Sacramento, Calif.	2,260	2.5	18.7	8.0	5.3	3.9	3.3	2.4	2.0	1.6	1.3	0.8
San Diego, Calif.	4,478	2.8	14.4	7.8	5.4	3.7	3.0	2.4	2.0	1.7	1.6	1.2
Seattle, Wash.	6,474	2.6	12.1	6.7	4.4	3.3	2.5	2.0	1.9	1.7	1.5	1.4

Source: Financial Survey of Urban Housing.
Note: —indicates no reports.

Prepared by Wholesale Trade Section
Marketing Research Division
Bureau of Foreign and Domestic Commerce

TABLE 2-A—GENERAL SUMMARY OF ESTIMATED MARKET VALUE OF PROPERTY, JANUARY 1, 1934, AND AVERAGE ANNUAL FAMILY INCOME, 1933; MEASURE OF DISPERSION AND PROBABLE ERROR, BY GEOGRAPHICAL DIVISIONS AND INCOME CLASSES

Geographical Division and Income Group	No. of Families Reporting	Average Value of Property (owner-occupied) Jan. 1, 1934	Average Family Income 1933	Ratio of Value of Property to Family Income	Standard Deviation of Sample	Coefficient of Variability (per cent)	Probable Error of Average Ratio	Four (4) Times Probable Error
New England								
Total	6,362	$6,490	$1,760	3.70	—	—	—	—
No income	227	5,712	—	—	—	—	—	—
$1-249	405	4,868	172	28.30	1.90	6.71	.64	2.56
250-499	575	5,422	385	14.10	1.91	13.55	.64	2.58
500-749	674	5,246	607	8.70	1.20	13.79	.40	1.62
750-999	541	5,460	869	6.30	.65	10.32	.22	.88
1000-1499	1,222	5,833	1,202	4.90	.57	11.63	.19	.76
1500-1999	915	6,191	1,700	3.60	.33	9.17	.11	.44
2000-2999	971	7,062	2,342	3.00	.23	7.67	.08	.32
3000-4499	440	8,573	3,522	2.40	.31	12.92	.10	.40
4500-7499	245	11,006	5,419	2.00	.24	12.00	.08	.32
7500 and over	147	15,624	12,591	1.30	.12	9.23	.04	.16
Middle Atlantic								
Total	6,978	4,888	1,267	3.90	—	—	—	—
No income	523	3,945	—	—	—	—	—	—
$1-249	636	4,001	167	23.90	5.61	23.47	1.90	.76
250-499	759	3,973	376	10.60	2.18	20.57	.74	2.96
500-749	975	4,130	606	6.80	1.66	24.41	.56	2.24
750-999	716	4,375	900	4.80	.72	15.00	.24	.96
1000-1499	1,310	4,700	1,176	4.00	.65	16.25	.22	.88
1500-1999	820	5,279	1,778	3.00	.48	16.00	.16	.64
2000-2999	726	6,100	2,300	2.60	.41	15.77	.14	.56
3000-4499	318	7,211	3,453	2.10	.19	9.05	.06	.24
4500-7499	130	9,821	5,322	1.80	.16	8.89	.05	.20
7500 and over	65	12,985	11,585	1.20	.21	17.50	.07	2.82
East North Central								
Total	30,808	5,834	—	4.30	—	—	—	—
No income	2,251	4,886	1,373	—	—	—	—	—
$1-249	2,902	4,466	168	26.60	6.12	23.01	1.65	6.60
250-499	3,589	4,744	373	12.70	2.76	21.73	.74	2.96
500-749	4,039	4,958	606	8.20	1.75	21.34	.47	1.88
750-999	2,950	4,876	875	5.90	1.42	24.07	.38	1.52
1000-1499	5,208	5,370	1,198	4.50	.76	16.89	.20	.80
1500-1999	3,821	5,741	1,704	3.30	.57	17.27	.15	.60
2000-2999	3,343	6,855	2,339	2.90	.54	18.62	.15	.60
3000-4499	1,556	8,647	3,471	2.50	.42	16.80	.11	.44
4500-7499	761	12,348	5,522	2.30	.58	25.22	.15	.60
7500 and over	388	22,374	13,541	1.70	.56	32.94	.15	.60
West North Central								
Total	23,489	3,728	1,442	2.60	—	—	—	—
No income	1,006	2,827	—	—	—	—	—	—
$1-249	1,687	2,388	184	13.00	3.67	28.20	.77	3.08
250-499	2,246	2,598	378	6.80	1.30	19.12	.27	1.08
500-749	2,797	2,916	615	4.70	.80	17.02	.17	.68
750-999	2,475	3,065	868	3.50	.57	16.29	.12	.48
1000-1499	4,572	3,372	1,196	2.80	.48	17.14	.10	.40
1500-1999	3,639	3,875	1,700	2.30	.36	15.65	.08	.30
2000-2999	3,005	4,746	2,342	2.00	.23	11.50	.05	.20
3000-4499	1,285	6,105	3,481	1.80	.21	11.67	.04	.16
4500-7499	551	8,409	5,391	1.60	.26	16.25	.05	.20
7500 and over	226	12,634	12,006	1.10	.21	19.09	.04	.16
South Atlantic								
Total	12,319	4,461	1,665	2.70	—	—	—	—
No income	481	3,570	—	—	—	—	—	—
$1-249	1,039	2,455	170	14.80	3.57	24.12	.80	3.20
250-499	1,232	2,680	380	7.10	1.03	14.51	.23	.92
500-749	1,376	3,031	641	4.80	.71	14.79	.16	.64
750-999	1,001	3,346	873	3.80	.62	16.32	.14	.56
1000-1499	2,023	3,877	1,213	3.30	.37	11.21	.08	.32
1500-1999	1,665	4,320	1,719	2.50	.39	15.60	.09	.36
2000-2999	1,798	5,316	2,359	2.30	.33	14.35	.07	.28
3000-4499	1,039	7,104	3,494	2.00	.19	9.50	.04	.16
4500-7499	467	10,218	5,564	1.80	.29	16.11	.07	.26
7500 and over	198	15,752	11,727	1.30	.31	23.85	.07	.28

Source: Financial Survey of Urban Housing.
Note: —indicates no reports.

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TABLE 2-A—GENERAL SUMMARY OF ESTIMATED MARKET VALUE OF PROPERTY, JANUARY 1, 1934, AND AVERAGE ANNUAL FAMILY INCOME, 1933; MEASURE OF DISPERSION AND PROBABLE ERROR, BY GEOGRAPHICAL DIVISIONS AND INCOME CLASSES (Continued)

Geographical Division and Income Group	No. of Families Reporting	Average Value of Property (owner-occupied) Jan. 1, 1934	Average Family Income 1933	Ratio of Value of Property to Family Income	Standard Deviation of Sample	Coefficient of Variability (per cent)	Probable Error of Average Ratio	Four (4) Times Probable Error
East South Central								
Total	5,065	$3,172	$1,242	2.60	—	—	—	—
No income	303	2,423	—	....	—	—	—	—
$1-249	750	1,759	165	10.60	6.21	23.49	.99	3.96
250-499	609	2,134	384	5.50	1.90	25.09	.54	2.16
500-749	558	2,393	623	3.90	1.07	26.41	.40	1.60
750-999	414	2,973	890	3.30	1.42	36.06	.47	1.88
1000-1499	785	3,231	1,227	2.60	.38	23.85	.24	.96
1500-1999	688	3,451	1,686	2.00	.19	22.00	.17	.68
2000-2999	574	4,284	2,331	1.90	.01	5.26	.04	.16
3000-4499	247	5,843	3,456	1.70	.09	17.06	.11	.44
4500-7499	111	9,128	5,285	1.70	.28	31.18	.21	.84
7500 and over	26	12,346	12,081	1.00	.03	18.00	.07	.28
West South Central								
Total	9,932	3,737	1,616	2.30	—	—	—	—
No income	468	3,178	—	....	—	—	—	—
$1-249	833	2,220	178	12.40	2.87	23.14	.77	3.08
250-499	906	2,515	392	6.50	1.54	23.69	.41	1.64
500-749	1,086	2,782	604	4.60	.96	20.87	.26	1.04
750-999	824	2,932	901	2.90	.71	24.48	.19	.76
1000-1499	1,633	3,290	1,201	2.70	.39	14.44	.10	.40
1500-1999	1,490	3,566	1,692	2.10	.37	17.62	.10	.40
2000-2999	1,449	4,532	2,350	1.90	.31	21.58	.08	.32
3000-4499	752	5,640	3,471	1.60	.30	18.75	.08	.32
4500-7499	341	8,440	5,400	1.50	.16	10.67	.04	.16
7500 and over	150	11,283	12,041	1.00	.14	14.00	.04	.16
Mountain								
Total	9,434	3,159	1,309	2.40	—	—	—	—
No income	597	2,393	—	....	—	—	—	—
$1-249	1,034	1,844	161	11.50	3.14	27.30	.84	3.36
250-499	1,011	2,339	367	6.40	1.51	23.59	.40	1.60
500-749	1,202	2,617	606	4.30	.71	16.51	.19	.76
750-999	841	2,662	880	3.10	.75	24.19	.20	.80
1000-1499	1,617	2,912	1,201	2.30	.36	15.65	.09	.36
1500-1999	1,334	3,269	1,702	1.90	.30	15.79	.08	.32
2000-2999	1,057	4,152	2,345	1.80	.26	14.44	.07	.28
3000-4499	476	5,661	3,497	1.60	.26	16.25	.07	.28
4500-7499	176	7,976	5,500	1.40	.22	15.71	.06	.24
7500 and over	89	13,002	11,486	1.10	.32	29.09	.08	.32
Pacific								
Total	18,042	3,543	1,340	2.60	—	—	—	—
No income	846	3,270	—	....	—	—	—	—
$1-249	1,663	2,357	176	13.30	2.82	21.20	.95	3.80
250-499	1,946	2,662	380	7.00	.69	9.86	.23	.92
500-749	2,228	2,931	610	4.80	.44	9.17	.15	.60
750-999	1,593	3,041	887	3.40	.33	9.70	.11	.44
1000-1499	3,288	3,292	1,204	2.70	.36	13.33	.12	.48
1500-1999	2,848	3,649	1,693	2.20	.20	9.09	.07	.28
2000-2999	2,229	4,418	2,334	1.90	.08	4.42	.03	.12
3000-4499	957	5,848	3,505	1.70	.06	3.24	.02	.08
4500-7499	327	7,710	5,288	1.50	.12	8.13	.04	.16
7500 and over	117	12,797	11,079	1.20	.22	11.83	.07	.28

Source: Financial Survey of Urban Housing.
Note: —indicates no reports.

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TABLE 3—RATIO OF ESTIMATED MARKET VALUE OF PROPERTY, JANUARY 1, 1934, TO AVERAGE ANNUAL

TABLE 3—RATIO OF ESTIMATED MARKET VALUE OF PROPERTY, JANUARY 1, 1934, TO AVERAGE ANNUAL FAMILY INCOME, 1933, BY INCOME CLASSES, AND BY CITY-SIZE GROUPS (Figures expressed in multiples of income)

City Size Groups	Number of cities reported	All incomes	Family Income Groups, 1933									
			$0 to 249	$250 to 499	$500 to 749	$750 to 999	$1,000 to 1,499	$1,500 to 1,999	$2,000 to 2,999	$3,000 to 4,499	$4,500 to 7,499	$7,500 and over
Total	52	3.1	17.5	8.9	5.9	4.2	3.4	2.6	2.3	2.8	1.8	1.3
Under 25,000	2	2.5	10.1	6.5	4.8	3.0	2.4	2.0	1.8	1.9	1.5	0.8
25,000 to 49,999	9	2.6	12.6	6.8	4.4	3.4	2.9	2.2	2.0	1.7	1.6	1.0
50,000 to 74,999	10	2.8	13.3	7.4	5.0	3.8	3.0	2.4	2.3	1.9	1.8	1.1
75,000 to 99,999	4	3.6	21.0	10.0	6.6	4.2	3.3	2.6	2.2	1.9	1.7	1.2
100,000 to 199,999	13	2.9	16.1	7.9	5.3	3.8	3.1	2.4	2.1	1.8	1.6	1.2
200,000 to 299,999	3	2.8	16.3	9.3	5.9	4.2	3.6	2.6	2.4	2.0	1.8	1.2
300,000 to 499,999	8	2.6	13.4	6.9	4.8	3.6	2.8	2.2	2.0	1.8	1.6	1.2
500,000 and over	3	4.1	25.9	12.5	8.1	5.6	4.4	3.4	2.9	2.4	2.2	1.6

Cities with Population under 25,000

Boise, Idaho
Casper, Wyo.

Cities with Population 25,000 to 49,999

Butte, Mont.
Fargo, N. Dak.
Baton Rouge, La.
Hagerstown, Md.
Paducah, Ky.
Sioux Falls, S. Dak.
Wichita Falls, Tex.
Jackson, Miss.
Phoenix, Ariz.

Cities with Population 50,000 to 74,999

Greensboro, N. C.
Columbia, S. C.
Asheville, N. C.
Pueblo, Colo.
*Kenosha, Wisc.
Austin, Texas
Springfield, Mo.
Charleston, S. C.
Topeka, Kansas
Portland, Maine

Cities with Population 75,000 to 99,999

St. Joseph, Mo.
*Racine, Wisc.
Lansing, Michigan
Lincoln, Nebr.

Cities with Population 100,000 to 199,999

*Little Rock, Ark.
*Waterbury, Conn.
*Binghamton, N. Y.
*Erie, Pa.
*Wichita, Kansas
*Peoria, Ill.
*Sacramento, Calif.
*Jacksonville, Fla.
*Trenton, N. J.
*Wheeling, W. Va.
*Des Moines, Iowa
*Salt Lake City, Utah
*San Diego, Calif.

Cities with Population 200,000 to 299,999

*Oklahoma City, Okla.
*Richmond, Va.
*Syracuse, N. Y.

Cities with Population 300,000 to 499,999

*Worcester, Mass.
*Dallas, Tex.
*St. Paul, Minn.
*Atlanta, Ga.
*Birmingham, Ala.
*Portland, Oreg.
*Indianapolis, Ind.
*Seattle, Wash.

Cities with Population 500,000 and over

*Minneapolis, Minn.
*Providence, R. I.
*Cleveland, Ohio

*Metropolitan District
Source: Financial Survey of Urban Housing, 1934

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TABLE 3A.—GENERAL SUMMARY OF ESTIMATED MARKET VALUE OF PROPERTY, JANUARY 1, 1934, AND AVERAGE ANNUAL FAMILY INCOME, 1933; MEASURE OF DISPERSION AND PROBABLE ERROR, BY CITY-SIZE GROUPS AND INCOME CLASSES

City-size Groups and Income Groups	No. of Families Reporting	Average Value of Property (owner-occupied) Jan. 1. 1934	Average Family Income 1933	Ratio of Value of Property to Family Income	Standard Deviation of Sample	Coefficient of Variability (per cent)	Probable Error of Average Ratio	Four (4) Times Probable Error
Less than 25,000								
Total	1,964	$ 3,257	$ 1,327	2.50	—	—	—	—
No income	92	2,732	—	—	—	—	—	—
$ 1- 249	138	1,949	193	10.10	1.87	18.51	.90	3.59
250- 499	204	2,387	370	6.50	.54	8.31	.26	1.03
500- 749	262	2,838	590	4.80	.32	6.67	.15	.61
750- 999	169	2,583	875	3.00	.63	21.00	.30	1.21
1000-1499	414	2,784	1,176	2.40	.26	10.83	.12	.50
1500-1999	315	3,435	1,690	2.00	.36	18.00	.17	.69
2000-2999	243	4,308	2,330	1.80	.10	5.56	.05	.19
3000-4499	76	6,345	3,396	1.90	.07	3.74	.03	.14
4500-7499	40	8,133	5,453	1.50	.07	4.70	.03	.14
7500 and over	11	11,018	12,773	.86	.56	—	.27	1.07
25,000 - 50,000								
Total	7,997	3,644	1,428	2.60	—	—	—	—
No income	529	2,662	—	—	—	—	—	—
$ 1- 249	816	2,072	165	12.60	5.14	40.79	1.15	4.61
250- 499	798	2,635	385	6.80	1.74	25.59	.39	1.56
500- 749	971	2,683	612	4.40	1.27	28.86	.28	1.13
750- 999	728	2,958	881	3.40	1.13	33.24	.26	1.02
1000-1499	1,302	3,428	1,200	2.90	.20	6.90	.05	.19
1500-1999	1,101	3,815	1,697	2.20	.59	26.82	.13	.53
2000-2999	944	4,753	2,346	2.00	.45	22.50	.10	.40
3000-4499	497	6,106	3,514	1.70	.41	24.10	.09	.38
4500-7499	203	8,738	5,471	1.60	.39	24.38	.09	.35
7500 and over	108	11,327	11,519	.98	.35	—	.08	.32
50,000 - 75,000								
Total	11,016	4,000	1,416	2.80	—	—	—	—
No income	476	3,104	—	—	—	—	—	—
$ 1- 249	1,067	2,218	166	13.30	6.12	46.01	1.31	5.24
250- 499	1,254	2,806	378	7.40	2.92	39.46	.62	2.48
500- 749	1,398	3,070	618	5.00	1.71	34.20	.36	1.46
750- 999	1,075	3,302	874	3.80	1.19	31.32	.26	1.02
1000-1499	1,829	3,667	1,203	3.00	.78	26.00	.17	.68
1500-1999	1,478	4,090	1,685	2.40	.63	26.25	.14	.54
2000-2999	1,382	5,358	2,341	2.30	.43	18.70	.09	.38
3000-4499	653	6,748	3,483	1.90	.40	21.05	.09	.35
4500-7499	287	9,565	5,356	1.80	.37	20.56	.08	.32
7500 and over	117	13,301	12,022	1.10	.32	29.09	.07	.27
75,000 - 100,000								
Total	6,373	4,296	1,197	3.60	—	—	—	—
No income	445	3,776	—	—	—	—	—	—
$ 1- 249	673	3,666	175	21.00	7.99	38.05	2.69	10.76
250- 499	792	3,736	375	10.00	3.21	32.10	1.09	4.34
500- 749	868	3,968	604	6.60	1.89	28.64	.64	2.56
750- 999	646	3,727	882	4.20	1.11	26.43	.38	1.51
1000-1499	1,129	3,980	1,193	3.30	.81	24.55	.28	1.11
1500-1999	783	4,353	1,697	2.60	.61	23.46	.21	.84
2000-2999	649	5,169	2,361	2.20	.37	16.82	.13	.51
3000-4499	235	6,598	3,453	1.90	.27	14.21	.09	.38
4500-7499	110	9,692	5,744	1.70	.38	22.35	.13	.51
7500 and over	43	12,788	10,910	1.20	.39	32.50	.13	.51

Source: Financial Survey of Urban Housing.
Note: — indicates no reports.

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TABLE 3A.—GENERAL SUMMARY OF ESTIMATED MARKET VALUE OF PROPERTY, JANUARY 1, 1934, AND AVERAGE ANNUAL FAMILY INCOME, 1933; MEASURE OF DISPERSION AND PROBABLE ERROR, BY CITY-SIZE GROUPS AND INCOME CLASSES

(Continued)

City-size Groups and Income Group	No. of Families Reporting	Average Value of Property (owner-occupied) Jan. 1, 1934	Average Family Income 1933	Ratio of Value of Property to Family Income	Standard Deviation of Sample	Coefficient of Variability (per cent)	Probable Error of Average Ratio	Four (4) Times Probable Error
100,000 - 200,000								
Total	29,503	$ 3,935	$ 1,376	2.90	—	—	—	—
No income	1,716	3,189	—	—	—	—	—	—
$ 1- 249	2,632	2,704	168	16.10	7.16	44.47	1.34	5.36
250- 499	3,037	2,958	374	7.90	3.19	40.38	.59	2.37
500- 749	3,579	3,218	610	5.30	1.97	37.17	.37	1.48
750- 999	2,793	3,327	878	3.80	1.22	32.11	.23	.92
1000-1499	5,456	3,681	1,198	3.10	1.00	32.26	.19	.76
1500-1999	4,181	4,063	1,718	2.40	.69	28.75	.13	.51
2000-2999	3,553	4,863	2,342	2.10	.53	25.24	.10	.40
3000-4499	1,640	6,222	3,491	1.80	.42	23.33	.08	.32
4500-7499	639	8,578	5,364	1.60	.29	18.13	.05	.22
7500 and over	277	13,243	11,492	1.20	.26	21.67	.05	.19
200,000 - 300,000								
Total	6,208	4,913	1,729	2.80	—	—	—	—
No income	242	4,922	—	—	—	—	—	—
$ 1- 249	417	3,024	187	16.30	7.88	48.34	3.07	12.28
250- 499	533	3,243	348	9.30	2.82	30.32	1.10	4.40
500- 749	689	3,626	611	5.90	2.07	35.08	.81	3.24
750- 999	496	3,829	907	4.20	1.01	24.05	.39	1.56
1000-1499	1,083	4,329	1,193	3.60	.37	10.28	.14	.57
1500-1999	918	4,446	1,720	2.60	.70	26.92	.27	1.08
2000-2999	942	5,643	2,340	2.40	.44	18.33	.17	.68
3000-4499	531	7,131	3,487	2.00	.24	12.00	.09	.38
4500-7499	249	9,939	5,380	1.80	.20	11.11	.08	.32
7500 and over	108	14,556	12,361	1.20	.24	13.33	.09	.38
300,000 - 500,000								
Total	28,018	3,834	1,488	2.60	—	—	—	—
No income	1,303	3,197	—	—	—	—	—	—
$ 1- 249	2,567	2,348	176	13.40	6.40	47.76	1.52	5.10
250- 499	2,862	2,690	389	6.90	3.47	50.29	.83	3.32
500- 749	3,237	2,964	622	4.80	1.86	38.75	.45	1.78
750- 999	2,366	3,176	892	3.60	1.35	37.50	.32	1.30
1000-1499	4,870	3,436	1,213	2.80	.75	26.79	.18	.73
1500-1999	4,231	3,756	1,708	2.20	.62	28.18	.15	.59
2000-2999	3,705	4,641	2,343	2.00	.37	18.50	.09	.35
3000-4499	1,795	6,296	3,477	1.80	.22	12.22	.05	.22
4500-7499	758	8,799	5,458	1.60	.20	12.50	.05	.19
7500 and over	324	14,311	11,778	1.20	.24	20.00	.05	.22
500,000 and over								
Total	31,350	5,855	1,444	14.10	—	—	—	—
No income	1,899	5,102	—	—	—	—	—	—
$ 1- 249	2,639	4,491	173	25.90	5.74	22.16	2.24	8.96
250- 499	3,393	4,699	376	12.50	2.40	19.20	.94	3.75
500- 749	3,931	4,899	607	8.10	1.39	17.16	.54	2.16
750- 999	3,082	4,829	866	5.60	.88	15.71	.34	1.38
1000-1499	5,575	5,315	1,196	4.40	.75	17.05	.29	1.16
1500-1999	4,213	5,688	1,694	3.40	.49	14.41	.19	.76
2000-2999	3,734	6,749	2,334	2.90	.46	15.86	.18	.73
3000-4499	1,643	8,494	3,486	2.40	.36	16.25	.16	.62
4500-7499	823	12,218	5,484	2.20	.39	17.73	.16	.62
7500 and over	418	21,856	13,726	1.60	.35	21.88	.14	.54

Source: Financial Survey of Urban Housing.
Note: — indicates no reports.

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Bureau of Foreign and Domestic Commerce

or the dispersion of the reports in each city, it is possible to tell the probable error of the average. The most common measure of the variability in a given sample is most likely the standard deviation. It measures the range from the average within which approximately two-thirds of returns will fall, assuming a normal or bell-shaped distribution according to the law of probability. When the standard deviation is expressed as a percentage of the mean, it is known as the coefficient of variability. The probable error of the mean is used for this purpose. This is found by dividing the standard deviation of the sample by the square root of the number of reports and multiplying by .6745.[8] The probable error signifies that the chances are one to two that the average of an indefinitely large sample, collected in the same way as the given sample, would vary more than the amount of the probable error from the average of the sample we have. Owing to the probabilities of sampling, the chances of an average being more inaccurate than about four times its probable error is but one to one hundred. For example, in New England, in the income group, $1,000 to $1,499, the average value of property as a multiple of income was 4.9, with a probable error of .19 and 4 times probable error of .76. Therefore, the chances are one to two that if the sample were taken again in the same area under similar conditions, the mean ratio would fall within the range of 4.71 and 5.09, or about four per cent either way from the mean, and the chances of one to one hundred that the average would fall outside of the range 3.14 to 5.66 or fifteen per cent plus or minus the average. Corresponding figures are shown for other income groups in Table 3A.

Although the fifty-two cities have been arranged in the tables by Census geographical divisions, and data for each city have been averaged, it should not be inferred that such averages are representative of each geographical division. Furthermore, attention is called to the fact that the data cannot be projected for the entire country, because the *Financial Survey of Urban Housing* is a survey of urban housing exclusively and does not take into account conditions in rural residential communities or farming areas. With proper consideration, however, the averages are reliable and can be used for comparison with similar data for other divisions.

[8]Statistical device used to arrive at the constant .6745 is fully described in any good standard textbook on statistical methods.

Amortization or Depreciation Reserves

By CUTHBERT E. REEVES, M.A.I.

MUCH has been said and written as to the relative merits of various rules or methods in vogue for setting up amortization reserves and for anticipating, in valuation analyses, that loss of value to be expected from ordinary depreciation factors. Nevertheless, this direct comparison of the workings of the commonly used hypotheses develops their contrasts in a somewhat novel manner and also produces an indictment of one method which will amaze many of those who previously may have favored its use.

METHODS OF COMPUTING

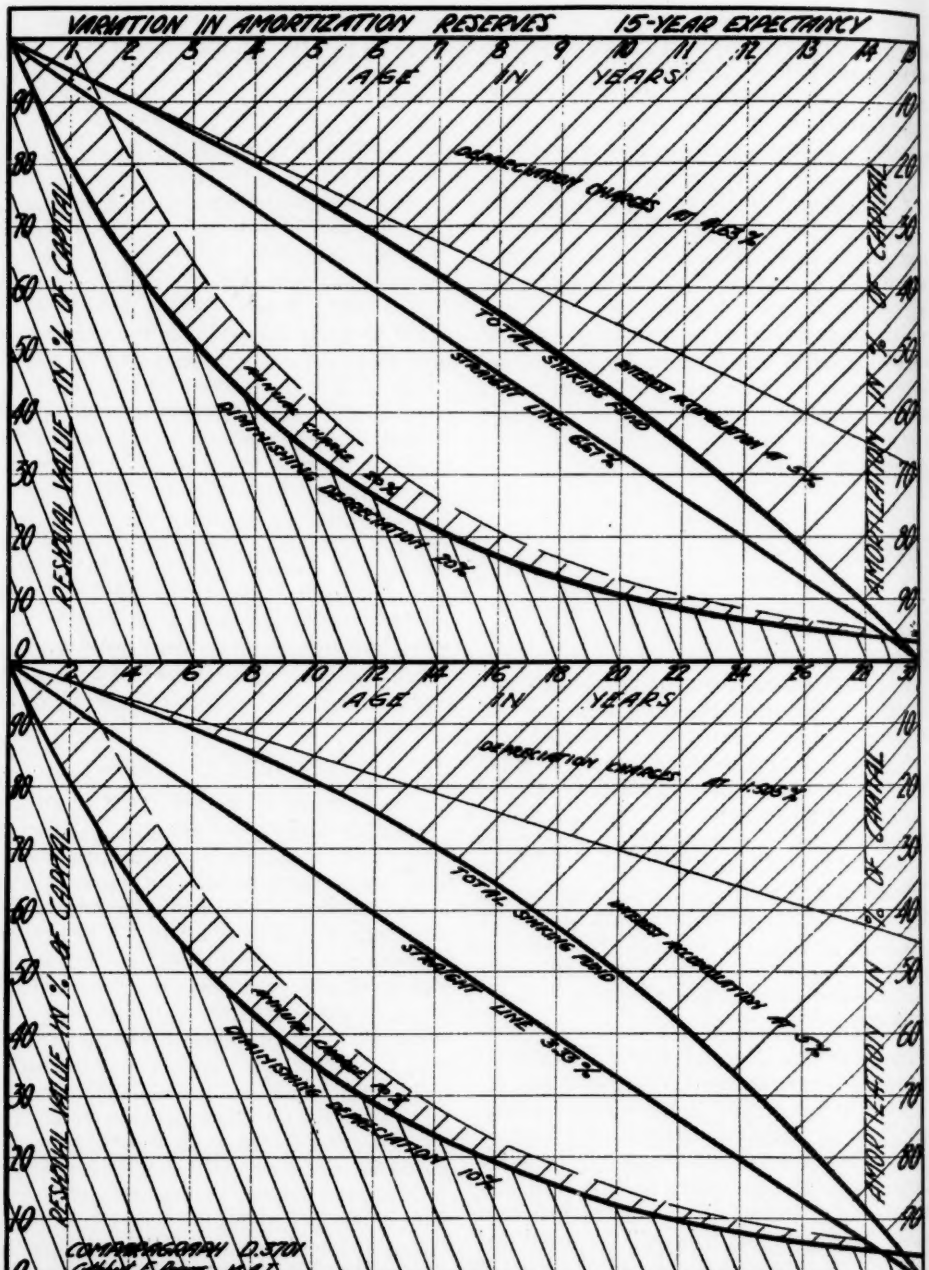
The three methods contrasted herein are: (1) the Sinking Fund method, in which a constant amount is set aside for depreciation in each year of the life expectancy assigned to the subject property, these reserves being such that, with their interest accumulations, their sum will at the prescribed maturity equal the full capital value of the unit to be amortized; (2) the Straight Line method, in which the subject property is retired uniformly throughout its expectancy by a fixed percentage of the full capital amount; (3) the Diminishing Balance method, in which the capital sum is progressively diminished by applying a constant rate of depreciation to the successively lower amounts thus produced throughout whatever expectancy is adopted.

The criteria adopted for this analysis are those which approximately test the actual workings of the three selected methods from a practical monetary point of view. For specific purposes and under especial conditions, other factors and different weighting of those set forth herein might be desirable; this will be amplified later in this discussion.

Before making direct comparisons, let us consider the cardinal points of the three. Each is reputed to have especial applicability for certain purposes, and the proponents of each usually decry the use of other methods. All three require the adoption of an expectancy of remaining useful life for the subject property; the effect of error in the life assumed varies, however, as will subsequently be demonstrated. Similarly, they all require the selection of a constant rate of depreciation charge, but, again, the effect of this rate varies according to the procedure by which it is applied. Both the Straight Line and the Diminishing Balance theories provide for the progressive direct return of capital to the owner, but the Sinking Fund plan differs in prescribing annuity contributions which must be held intact to accumulate interest and thus build up a reserve; only at maturity will such reserve suffice to offset the loss of capital by depreciation.

GRAPHICAL COMPARISON

Comparagraph D.3701 (see page 170) shows strikingly the amount of depreciation reserve and the reduced capital value consequent thereupon for each of these three methods throughout a fifteen-year expectancy and also during a thirty-year expectancy. In each case the depreciation charge in any given year under the Diminishing Balance theory is measured by the vertical distance between the broken line and the unbroken curve toward which it converges; because there is no absolute zero in the operation of this rule, these curves are plotted to a nominal residual value at maturity. This chart emphasizes how great a part of the amortization under the Sinking Fund plan must be realized from interest accumulations, especially during the later part of the assumed life and for the longer expectancies. That part


VARIATION IN AMORTIZATION RESERVES 15-YEAR EXPECTANCY
AGE IN YEARS
RESIDUAL VALUE IN % OF CAPITAL
AMORTIZATION IN % OF CAPITAL
DEPRECIATION CHARGES AT 6.66%
TOTAL SINKING FUND
STRAIGHT LINE 6.67%
INTEREST ACCUMULATION AT 5%
ANNUAL CHARGE 4.3%
DIMINISHING DEPRECIATION 20%
AGE IN YEARS
DEPRECIATION CHARGES AT 3.33%
TOTAL SINKING FUND
STRAIGHT LINE 3.33%
INTEREST ACCUMULATION AT 5%
ANNUAL CHARGE 1.7%
DIMINISHING DEPRECIATION 10%
COMPARAGRAPH D.370
VARIATION IN AMORTIZATION RESERVES 30-YEAR EXPECTANCY

of the depreciation reserve to be set aside from earnings of the subject property is marked by heavy shading; the remainder, which must be produced by reinvestment of the reserve itself, is indicated by lighter shading.

CRITERIA AND TESTS OF METHODS

In Table D.3701 the responses of the three methods to six chosen criteria are compared and a percentage rating allotted for each point according to compliance with these specifications. In each case the rate of depreciation is assumed to be constant. Criterion No. 1 specifies that the principal sum from which depreciation is to be computed shall diminish, as does the property value it represents, in most instances. Criterion No. 2 requires the annual charge for depreciation to be less in amount each successive year, as the principal and the ability to earn decrease. Criterion No. 3 requires the residual capital to decrease progressively, as does the property value. Criterion No. 4 specifies that the demand upon the property for a fair return diminish, as does the probability of net earnings to yield such a return. Criterion No. 5 rates the total demand upon the property for amortization and interest yield during its life. Criterion No. 6 specifies that at all times the depreciation reserve shall approximately equal the accrued loss of capital value.

Many readers of this article may disagree as to the criteria applied, or believe that some should receive greater consideration than others. Criterion No. 6 is the most important, in my opinion, but no one point is conclusive; together, however, they seem to fairly indicate the relative theoretical merits of the three methods thus compared. There are, unfortunately, other qualities to be considered—those of practicality in the application of the rules and the receptivity of the professional and lay public to their use. While these have no place in an abstract analysis of the technical excellence of results, they must be given great weight in the selection of a procedure which one hopes to demonstrate with clarity and conviction to a practical and mentally impassive world.

From this tabulation, it is evident that the Sinking Fund method fails to comply with the requisites cited, that the Straight Line method meets most of the demands, and that the Diminishing Balance theory responds almost perfectly to the tests. It is regrettable that the last named is not easily computable and that tables interpreting it are not commonly available. Moreover, its operation probably seems formidable to the laity; hence, it appears that the Straight Line method might logically receive preference.

TABLE D.3701

CRITERIA ADOPTED	SINKING FUND Effect	Rating	STRAIGHT LINE Effect	Rating	DIMINISHING BALANCE Effect	Rating
1. Principal sum used as basis for computation of charge	Constant	0	Constant	0	Decrease	100
2. Money amount of depreciation	Constant	0	Constant	0	Decrease	100
3. Residual capital value	Accelerating decrease	50	Constant decrease	100	Retarding decrease	100
4. Demand for return upon capital	Constant	0	Decrease	100	Decrease	100
5. Demand for return and amortization during expectancy	Greatest	50	Medium	75	Least	100
6. Ratio of amortization reserve to accumulated depreciation	Less	0	Approx. equal	100	Greater	50
Summary: Percentage of correct operation		17		63		92

TABLE D. 3702

Assumed Investment $1,000,000; $500,000 in Land and $500,000 in Building.
Land value stable; building value to be amortized in 25 years.

S. F. Method: Sinking Fund of 2.0952% per annum must earn 5% and compound annually.
S. L. Method: Straight Line depreciation of 4%, returning capital progressively.
D. B. Method: Diminishing depreciation of 10%, returning capital progressively.

PERIOD	AMORTIZATION IN PERIOD			CAPITAL AT END OF PERIOD			AMORTIZATION & 5% ON CAPITAL		
	S. F.	S. L.	D. B.	S. F.	S. L.	D. B.	S. F.	S. L.	D. B.
	$	$	$	$	$	$	$	$	$
1st Year	10,476	20,000	50,000	1,000,000	980,000	950,000	60,476	70,000	100,000
2nd "	"	"	45,000	"	960,000	905,000	"	69,000	92,500
3rd "	"	"	40,500	"	940,000	864,500	"	68,000	85,750
4th "	"	"	36,450	"	920,000	828,050	"	67,000	79,675
5th "	"	"	32,805	"	900,000	795,245	"	66,000	74,207
5 Years	52,380	100,000	204,755				302,380	340,000	432,132
Interest	5,508			less S. F.					
Accumul.	57,888			942,112					
6th Year	10,476	20,000	29,525	1,000,000	880,000	765,720	60,476	65,000	69,287
7th "	"	"	26,572	"	860,000	739,148	"	64,000	64,858
8th "	"	"	23,915	"	840,000	715,233	"	63,000	60,872
9th "	"	"	21,523	"	820,000	693,710	"	62,000	57,285
10th "	"	"	19,371	"	800,000	674,339	"	61,000	54,056
5 Years	52,380	100,000	120,906				302,380	315,000	306,358
Interest	21,501			less S. F.					
Accumul.	131,769	200,000	325,661	868,231			604,760	655,000	738,490
11th Year	10,476	20,000	17,434	1,000,000	780,000	656,905	60,476	60,000	51,151
12th "	"	"	15,690	"	760,000	641,215	"	59,000	48,535
13th "	"	"	14,122	"	740,000	627,093	"	58,000	46,183
14th "	"	"	12,709	"	720,000	614,384	"	57,000	44,064
15th "	"	"	11,438	"	700,000	602,946	"	56,000	42,157
5 Years	52,380	100,000	71,393				302,380	290,000	232,090
Interest	41,913			less S. F.					
Accumul.	226,062	300,000	397,054	773,938			907,140	945,000	970,580
16th Year	10,476	20,000	10,295	1,000,000	680,000	592,651	60.476	55,000	40,442
17th "	"	"	9,265	"	660,000	583,386	"	54,000	38,898
18th "	"	"	8,339	"	640,000	575,047	"	53,000	37,508
19th "	"	"	7,505	"	620,000	567,542	"	52,000	36,257
20th "	"	"	6,754	"	600,000	560,788	"	51,000	35,131
5 Years	52,380	100,000	42,158				302,380	265,000	188,236
Interest	67,964			less S. F.					
Accumul.	346,406	400,000	439,212	653,594			1,209,520	1,210,000	1,158,816
	10,476	20,000							
21st Year	"	"	6,079	1,000,000	580,000	554,709	60,476	50,000	34,118
22nd "	"	"	5,471	"	560,000	549,238	"	49,000	33,206
23rd "	"	"	4,924	"	540,000	544,314	"	48,000	32,386
24th "	"	"	4,431	"	520,000	539,883	"	47,000	31,647
25th "	52,380	100,000	3,988	500,000	500,000	535,895	"	46,000	30,982
5 Years	101,214		24,893				302,380	240,000	162,339
Interest									
TOTAL	500,000	500,000	464,105	*Unamortized bldg.		35,895	1,511,900	1,450,000	1,321,155
Interest	261,900								35,895*
Reserves	238,100								1,357,050

OBJECTIONS TO SINKING FUND METHOD

In addition to the assumption of life expectancy common to all three methods, the Sinking Fund procedure presupposes that the selected rate of interest can at all times be earned by the accumulating reserve, which necessitates the presumed investment of that reserve in securities of so stable a character as to minimize the yield that can be expected therefrom. This may require the application of a correspondingly higher depreciation rate or prompt the adoption of an expectancy so long as to be incompatible with the probability of useful life. This method also demands great stability in earning power to yield a return upon an undiminished capital sum. Although charges are made annually for depreciation, the reserve so created is not returned piecemeal to the owner but is, in effect, placed in escrow until maturity; therefore, the investment must be presumed to remain full and to owe interest yield throughout the expectancy.

Another very practical objection to the Sinking Fund method is that throughout the greater part of the life of the subject property the amortization reserve is probably far less than the accrued depreciation. Obviously, that deficiency entails a loss to the owner should he, during that period, sell at a valuation which fairly gauges accrued depreciation. Only when near maturity does this method approximately guarantee the return of extinguished capital. It will be noted from Figure D.3701 that although at their maximum divergence a sinking fund assumed to earn five per cent is only ten points less than the reserve produced by the Straight Line method in the case of a fifteen-year expectancy, it is eighteen points deficient when the life estimate is thirty years and, therefore, should be increased fifty per cent.

DIMINISHING BALANCE METHOD

The Diminishing Balance method, although less practical for everyday work, is admirably adapted to certain accounting uses. For instance, the cost of specific units of equipment may thus be amortized in accordance with fiscal conditions. When new, maximum production may be expected and maintenance costs should be low; with age and use come interruptions and lowered efficiency, less production, and increasing maintenance and operating costs. Diminishing charges for amortization tend to offset these increased production costs and thus to stabilize net earnings. The scale of depreciation customarily attributed to automobiles is a forceful example of the practical application of this theory. It is common knowledge that during the first few years of the life of a car the monetary loss is very great and that thereafter the resale value changes less from year to year and approaches a constant residual value as long as kept reasonably efficient in operation.

AN IDEAL METHOD

The ideal trend would be a compounding of the Straight Line for, say, half the estimated life and a Diminishing charge thereafter. Thus, one of the vital weaknesses of both the Straight Line and the Sinking Fund methods would be corrected. Under either of the latter two, a comparatively small error in the expectancy assumed may result in the property becoming valueless before a sufficient reserve is accumulated, or in the reserve maturing at a time when the property still has a considerable expectancy of useful life. Under the Diminishing rule, the capital never is entirely wiped out. A constant rate is applied to the decreased value of each preceding year. A slowly decreasing residual value persists indefinitely, and variations from the assumed expectancies do not produce the embarrassment arising from such contingencies as when the other methods are employed.

METHODS RELATED TO PHYSICAL CONDITION

In so far as physical condition is concerned, it is probable that the Sinking

Fund curve more nearly approximates actuality during most of the life of a building. Well-built structures should evince but little deterioration in early life, but they will develop both unit and composite physical depreciation in later years. During the latter part of such life, the progressive trend of the Diminishing curve to one of comparatively little change might be claimed to best fit physical condition, as many buildings depreciate but little physically from year to year when once an age has been attained when ordinary repairs for roof, floors, and decorating recur periodically. The Straight Line lies between two curves, being nearer that of the Sinking Fund under the assumptions of life and rate most likely to be adopted. Physical condition is not, however, the determinant of life and value, although it may have great effect in many cases. The extinction of capital usually comes from economic causes, and much of the physical deterioration found may be concomitant with or corollary to those economic forces.

USE SANCTIONS STRAIGHT LINE

Because the Straight Line method periodically returns capital from depreciating property to the investor, approximately follows the trend of earnings and of residual value, and is simplest of application and demonstration, it is the most practical method to use in amortization and depreciation analyses of income-producing and other properties.

A HYPOTHETICAL CASE

To demonstrate specifically the points made in this discussion, Table D.3702 compares the three methods as to the depreciation reserve, the changing capital structure, and the demand for interest yield and amortization in a hypothetical case. The figures are for a property in which the investment is assumed to be one million dollars, equally divided between land and building, the latter to be amortized in twenty-five years.

Assuming the Straight Line rule to give a fair index of the decreasing building value, it will be seen that the Sinking Fund is consistently inadequate, even though the theoretical accumulation of interest thereto at five per cent is conceded. At the end of ten years it lacks $68,000 of the $200,000 indicated as necessary, and at fifteen years is $74,000 short of the desired $300,000.

One might expect that the Sinking Fund method would have the merit of demanding less yield from the property throughout its producing life than the other processes, but such is not the case. Under that plan the property must produce $61,900 more than under the Straight Line rule and $154,850 more than if the Diminishing Balance method is used. This is due to the fact that, although the actual appropriations from earnings for depreciation are much less, none of the capital has been freed for profitable reinvestment, and the demand for a return upon the undiminished capital throughout the twenty-five years far exceeds that required under the two other methods.

It appears from this tabulation that after twenty-four years, with only a year of useful life prognosticated, the Sinking Fund method demands $10,476 for amortization, plus $50,000 interest upon capital; the Straight Line requires $20,000 for amortization but has reduced the building value so that interest yield is claimed from only $520,000—a total of $46,000; the Diminishing Balance method asks for only $30,982, about $4,000 for amortization and $27,000 interest. Which is the most appropriate to the conditions then to be anticipated?

The preceding paragraph illustrates how dangerous one great fallacy in most of our capitalization processes may be. Many of those who have abandoned the practice of capitalizing in perpetuity do treat the net earnings indicated by the past, present, or near future as a stable annuity for the period adopted as expectancy of usefulness and fail to recognize that the flow of earnings from a property usually decreases with age.

Can Real Estate Have More Than One Value?

By DOMINICK DUNN, M.A.I.

IF a canvass of the outstanding appraisers of the United States were made and an opinion requested of each, I am quite sure a majority would reply that there can be only one value to a parcel of real estate. Yet, there are many who adhere to the belief that, as one of their number recently expresses his opinion, "There are as many values as uses."

DEFINITION OF VALUE

A very generally accepted definition of "value" as applied to appraisal work might be worded something as follows:

> Value is a sum stated in terms of legal tender on which a buyer and seller can agree when both are intelligent, well informed, and not compelled to act.

VALUATION IMPLIES CERTAIN PREMISES

When we, as appraisers, place a value on real estate, we contemplate several premises. Among them are the following:

1. We contemplate the value to the average, usual, ordinary, customary buyer of such real estate.
2. Our valuation assumes a sale in order to express our finding in terms of legal tender and expresses itself in terms of a price the average, usual buyer of such realty would be justified in paying, this price not including financing costs.
3. We contemplate a logical buyer. We do not contemplate that someone who wants a dwelling will expect to buy a factory at such discount as would enable him to convert it into a house. We imply the type of buyer who is ordinarily interested in such realty. We know there may be a possible buyer who will pay a much higher price because it contains some peculiar feature or location that means nothing to the average, usual buyer. For example, I once sold a lot adjoining a varnish factory to a man who built a house on it in the belief that the fumes from the pitch melted in the factory would cure him of a bronchial ailment. We have all had similarly odd and unusual experiences that do not influence our estimate of the average, the usual, or the customary buyer.
4. We contemplate a justified valuation. The appraiser justifies his reasoning with explanations understandable to the layman. These show how and by what mental process he arrives at his conclusion.
5. We contemplate an appraisal sufficiently lucid to be understandable to the average buyer or seller of such property. We do not contemplate one so indefinite that it will enable either party to take advantage of the other.
6. We contemplate buyers and/or sellers who are free to act to their best interest. We do not contemplate a value wherein one or the other must act and take the other's demand.
7. When valuing land, valuation contemplates its worth when put to its "highest and best use," i.e., its most useful purpose known to the average, usual buyer of such property at the time of the valuation.
8. We contemplate that the sale of a house, a flat building, a store, a factory, or any other property ordinarily requires a certain period of time to build up a market, perhaps weeks or even months. We do not contemplate that our valuation must be realized on the spot.

CONFUSION OF TERMS

I recently read a discourse by the eminent jurist, Mr. Elihu Root, in which he says:

> "A discussion cannot be intelligent until there is a meeting of minds on a definition of the terms used in the discussion."

It seems to me that the exponents of multiple values entertain their views because they have a concept of the word "value" that differs from the generally accepted definition. Furthermore, they apparently confuse "value," "price," and "estimate," or they treat the words as synonymous. That a distinct difference exists in the meaning of the words, as applied to appraisal work, seems beyond dispute.

A department store may offer a clock at $1.00 which regularly sells at $2.00. They may charge the loss to advertising

and use the clock as a medium to attract customers to the store, believing that such customers will buy other merchandise of an amount sufficient to make up for the loss on the clock. Here, "value," in my interpretation, is $2.00, while "price" is $1.00.

A standard brand of shoe enjoying full popularity at $10 per pair is worth $10 because there exists a demand from a group of users of justifiable number to make such a shoe merchantable at $10. Because another group cannot use a shoe at more than $5.00 in cost would not justify the statement that the $10 shoe "has as many values as uses."

A man may build a new house at a cost of $10,000, which is readily salable in the ordinary course of events at $10,000. His wife may suddenly need an operation that demands $3,000 cash in advance, and he is without ready funds. To save her life, he sells the house on the spot for $7,000. Here, "value" does not change by any sound reasoning. Seven thousand dollars is the "price" he is compelled to take under circumstances that do not provide the average, usual, ordinary time allotted to sell such a house.

APPRAISAL FOR SPECIAL PURPOSES

An insurance company may want to know the extent of the risk they take to insure a building against fire loss. An appraiser tells them what it would cost to replace the structure. In such case he makes an "estimate" of reproduction cost. "Value" does not enter into the appraisal.

Some will argue that there must be a wholesale value for taxation purposes, quite different from individual parcel valuations for market. There are two or more answers to this:

1. Few, if any, economists agree that methods of tax valuation in the United States are just, sound, or even modern when methods of other political groups are compared. One can answer, therefore, with impunity that our tax valuation methods are not good appraising.
2. It is seldom that the sum of a whole appraisal is the total of its components. That is to say, each single parcel in a block may have a certain value, but if all the improvements in the block were embraced into one appraisal, the result might be quite different than the sum of the separate single improvements. There is some justification then for the values found by a taxing body which values by blocks rather than by units.

Mr. Carrol Wright in his article, "As Many Values As Uses," appearing in the magazine of The Society of Residential Appraisers for October, 1936, says: "Appraisers as a rule desire to be advised of the purpose for which the appraisal is to be used."

If by "appraisal" he means appraisal services in a broad way, that is, the various services which an appraiser might be called upon to render for different purposes, then, in principle, I agree with him. However, the concept of "value" is definite and specific and should embrace the "highest and best use," which, of course, means that there would be but one underlying value for the property.

Since there might be various figures legitimately and properly established in an appraisal of a property for certain purposes, which might vary from the estimate of the value of the property for its highest and best use, then it would appear essential that the appraiser know the purpose for which the appraisal is to be used. If he does not know the purpose, then his entire effort would be to estimate a value without qualification. While this can and might be done from the practical standpoint of preparing and presenting his report, he would be handicapped unless he did know the purpose.

If I knew that an appraisal was for a mortgage house that loaned eighty per cent of value, would I not be likely, subconsciously if not otherwise, to be more thorough than if I knew they limited all loans to forty per cent? And can there be sound reasoning that appraisal work should be less thorough in one case than

in another? Would not such practice be inexcusable in case one were to err and make a superficial appraisal for the eighty per cent mortgage house, thinking it were for the forty per cent house, and learn later of loss due to his lack of thoroughness?

Mr. Wright goes on to say that the appraiser's first thought upon receiving an assignment is, "for what purpose is the appraisal?"

Does he for instance commend and give countenance to one value for the plaintiff and another for the defendant in a foreclosure proceeding? While we admit without question that this is often the case (perhaps even the rule), is it not that very inconsistency that recognized appraisal groups are endeavoring to eradicate?

Would he commend and give countenance to three different values for a bond issue—one for the promoter, one for the underwriter, and another for the prospectus that goes out to the bond buyer? Is not that also one of the damnable conditions of the last decade that we are striving to eradicate?

Would he commend and give countenance to two valuations in a partition suit? If so, which should he have the court accept, the high or the low, the plaintiff's or the defendant's claim, both or neither? If I were sitting as the court and such valuations were presented to me, frankly stated as being for different purposes and submitted by recognized appraisers, I would take the latter action. I would reject both.

HOW QUESTIONABLE APPRAISALS ARISE

He further says that questionable appraisals arise from not knowing for what purpose the appraisal is to be used.

Questionable appraisals might be occasioned in two or more ways:

1. An appraisal might not be sufficiently complete in detail, from the standpoint of the reader, to meet the present standards of form.
2. Qualifying statements necessary to good appraisal work may be absent.

Lack of knowledge of the purpose of the appraisal should not cause either to be omitted.

To prove his case, Mr. Wright cites the predicament of an executor of a trust having jurisdiction over a property in a community enjoying a "boom" at prices in excess of "fair worth." The executor orders an appraisal and is given one showing a value less than it can be sold for in the market. The executor is in a predicament since he does not know whether to sell at the appraised figure or the higher market figure.

He further says that if a trust officer contemplated a purchase for his trust in the same "boom" area and bought on an appraisal based upon present market, the trust officer and appraiser would both suffer in reputation when prices came down to value.

Mr. Wright appears to contradict himself in this paragraph of his article. The title of his writing reads: "As many values as uses"; still in this paragraph he describes a region where sales prices are above "fair worth." I shall assume his definition of "fair worth" would be my definition of "value." If there are as many values as uses, then here we have three separate and distinct "uses" for the buyer who, being intelligent, knows the price asked is above value; a speculator, whose only interest is to ride the market up, has a "use" to resell it at a still higher price; and someone compelled to buy has a "use" regardless of value. Why does Mr. Wright contradict the title of his essay by stating in this paragraph that "prices are far in excess of true worth," if there are "as many values as uses"? I believe that if he will adjust his definition of "value," he will find here that his "true worth" is "value" and that current "boom" prices have no bearing on "value."

VALUE CONFUSED WITH PRICE

I hold that in both cases, if the appraiser has a clear conception of "value," his ap-

praisal of a given property would be the same either for the executor who contemplates selling or the trust officer who contemplates buying. If a parcel of real estate will sell for more than its value, it is a mighty good time to sell. Inversely, if a parcel can be bought for less than its value, it is a good time to buy. It is my belief that most of the great fortunes made by real estate operations were accumulated by operators who were proficient in so sensing the difference between "value" and "price."

In the one case a good executor would file the appraisal in order that, when he might be questioned about his action in selling, he would have supporting evidence of his own good judgment. In the other case the trust officer would also file the appraisal as supporting evidence (should he be questioned) of his opinion that it was the wrong time to buy that particular property or in that particular area.

Mr. Wright next cites a factory having a "going" value to the occupant or owner, whereas, if offered in the market its value would be quite different. Let us assume another factory nearby having every advantage and facility of the one occupied. Mr. Wright contends that the occupied factory is worth more to its occupants than the vacant factory. Let us also assume that he appraises the occupied factory at $50,000. Upon going into the situation fully we learn that moving costs, disturbance and interruption to business, etc. in moving to the new site would amount to $5,000. The vacant factory is for sale at $40,000. The occupant of the first factory can move and make $5,000 profit. Obviously, the valuation of the first factory is wrong, or the vacant factory can be bought for $5,000 less than it is worth. Either his appraisal is more than value, or the price of the vacant factory is less than its value, but value is the same in both cases. The costs of moving from one site to the other are not a part of the realty value. Were the vacant factory for sale at $45,000, his appraisal of the occupied factory $50,000, and moving costs $5,000, then value in each case is constant—he has merely included moving costs in his valuation.

He again cites a city dwelling on a fifty-foot lot on a street having a land value of $30 per foot by comparison with a vacant lot nearby offered for sale at that figure. The owner of the residence wants to acquire twenty feet adjoining his lot. Mr. Wright calls attention to the difference in value per front foot due to the different use to which the twenty feet may be put compared with the fifty feet, that is, the different values that might result if the twenty feet were used to enlarge the adjoining lot, to create an alley, to widen a street, to create an easement for a dangerous high tension power line, or for an underground sewer, etc. "Different values in each case," he says.

Going back to our definition of value, valuation contemplates land value to be based upon its most useful purpose to the average, usual buyer of such land. Ordinarily, twenty feet of frontage in a residential district cannot be as valuable per front foot as would, let us say, forty or fifty feet. It cannot be improved so usefully. Of course, there can be exceptional cases. Only with difficulty and danger can one discuss special use or nonconforming use values, for almost every case is an entity in itself. Conditions exist in one case that do not exist in the next. Speaking broadly of such a case as is outlined (twenty-foot frontage in a residential district), there is one most useful purpose—one highest and best use—at the time of the appraisal, based upon its zoning or restrictions and average or common use of the block or district.

If there is no other place for the dangerous high tension power line, if it must have right of way across that particular twenty feet, and if that use is more valu-

able than its use for additional lawn to the fifty-foot home yard, then its purchaser may be compelled to pay more than its value. He may have to pay for the unsightliness, the danger, the nuisance of workmen and litter, or, being compelled to buy, he may pay more than value as defined in the first paragraph of this article.

Value contemplates a buyer and seller whose minds meet when both are intelligent, fully informed, and not compelled to act.

Assume a similar situation in which a home owner has seventy feet instead of fifty feet and has an opportunity to sell the twenty feet for a power line at $50 per foot, whereas, its value for residential purposes might not be worth more than $30 per foot; the power line might so damage the value of the remaining fifty feet as to make the sale inadvisable. He might be the loser to sell twenty feet at $100 per foot. Valuation contemplates "intelligence" on the part of buyer and seller.

APPRAISER'S CLIENT SHOULD ADJUST ESTIMATED VALUE TO SPECIAL USE

Time and space prohibit recital of a multitude of situations that justify my adherence to the theory of one value that has enabled me to find my way out of any situation that has every occurred in my experience, whereas, those who subscribe to the theory of multiple values are in a world of contradictions and frequently entrapped by their own reasoning.

When an appraiser receives an assignment for a valuatiton, is it not more reasonable for him to assume that his employer can and will adjust his particular purpose to real value, whether he be buyer, seller, borrower, speculator, or whatever his purpose? It is not the function of the appraiser to determine value for his particular client, but rather value for the most common or likely use. If the client wants to know whether a five-room house is suitable for himself and twelve children, that is for him, his minister, or an economist to determine. It is not part of the appraiser's work.

Each client decides for himself if the value found by the appraiser is too high, too low, or just right for his purpose. If the mortgage house desires to direct its loans into certain channels or certain types, it says, "We will loan forty per cent, fifty per cent, or sixty per cent on this type and so much on that type."

The fire insurance company, when it wants to know the cost of a building for a fire risk, wants reproduction cost less physical depreciation. It is not interested in "value." One can appraise "reproduction cost" as well as "value."

Considering the writings of those who insist that real estate can have several values at the same moment, I am always confronted with the question of whether we, as a profession, are making progress in our attempt to impress the courts, lawyers, bankers, mortgage makers, and the public with our worth as members of some recognized body of appraisers until we agree on such a fundamental subject as, "Can real estate have more than one value?"

I am one of the school that can see only "confusion worse confounded" by subscribing to a belief in, and use of, a multiplicity of values unless the appraiser carefully qualifies his finding by a statement that he is acting in the dual capacity of appraiser and economist — a statement, such as, "I find the value of this property to be $10,000, but for the purpose intended by John Smith it is worth only $8,000."

I hope this article will arouse further discussion of this troublesome subject. I make no claims of authority or superiority of knowledge, and my mind is open to better reasoning than my own.

Comment and Discussion

Sutherland—ON THE APPRAISAL REPORT

IF any appraisal report is to accomplish its objective most effectively, namely, a conclusive presentation of estimated value, it is not sufficient that information and statistics included therein contribute to the appraiser's estimate of value; they must also contribute to the reader's understanding and conclusion and in the same general way and proportion as the appraiser found them. For example, it is not sufficient to include statistical tables with the mere statement that, "These have been taken into consideration." If the appraiser and the reader are to reach the same conclusion, the latter must also know how and to what extent these data entered into the estimate of value.

To accomplish its purpose, the report, first, should omit, with one probable exception, all irrelevant material; second, should include only those points which the reader must have in order to reach a clear understanding of value; and, third, should present these relative points in such a sequence that each will be a clear, definite, and logical step toward the conclusion. This third item, namely, sequence of ideas, is considered an agent of first importance in showing how the appraiser reached his conclusion and is by no means of secondary importance in adding to the conclusiveness of the report.

The possible exception to irrelevant material mentioned above is the inclusion of a statement of the appraiser's qualifications. Please notice that while this is irrelevant to bringing your reader to a conclusion, it is not irrelevant to the objective of your report with particular reference to *conclusiveness*. The reader's confidence in the weight given each item by the appraiser will in no small measure be dependent upon his confidence in the appraiser's ability.

It seems probable that in the past too many appraisal reports have been written without adequate regard to the importance of the above three points and particularly the matter of *sequence of ideas*. Probably some standardization along this line would be a definite contribution to the profession of appraising. In my opinion, the simple rule to follow would be to have the sequence of the report follow generally the same order in which an inspection of the property is made—preceded, however, by maps, photographs, plans, and descriptions.

While it is anticipated that not all appraisers will agree with this sequence, the writer submits the following order:

Part I

1. Cover of report.
2. Title page.
3. Index.
4. Letter of transmittal or introduction.
5 Appraiser's certificate of value.

Part II

6. (a) Brief statement of location of property.
   (b) Kind of property.
   (c) Legal description.
   (d) Address.
   (e) Date examined.
7. Map of the state, indicating city or town.
8. Map of county.
9. Map of city, indicating location of site.
10. Data pertaining to the city—population, growth, schools, churches, etc.
11. Photograph—front view of site.
12. Photograph—street view showing site.
13. Plans of the building, showing dimensions, etc.
14. Description of land and building, giving size, type of construction, age, etc.

15. Data pertaining to location, such as trend, kind of buildings, etc.
16. Income data. (Show net income over last ten years, if available.)
17. Expenses (actual and stabilized).
18. Valuation analysis, such as:
    (a) Comparative transactions and conclusions drawn therefrom.
    (b) Reproductive cost estimate and commentary.
    (c) Income analysis and comments.
    (d) Conclusions.

Part III

(Now that the appraisal is practically completed, the next logical question that arises in the reader's mind is: What is the background of this appraiser, and how is he qualified?)

19. Qualifications of the appraiser.
20. Limiting conditions. (This, I believe, should come last. It seems to be an appropriate ending, as you are limiting all that has preceded. Also, in my opinion, this page should be signed as well as the letter of transmittal.)

This suggested outline does not propose to be inclusive of all necessary data. Some may be excluded and other information may be added, according to the type of property appraised.

I believe it is quite possible to have a standardized sequence form of subjects which comprehends all inclusive subject matter that would cover any urban property, it being understood, however, that most appraisal reports would not necessarily include all the subjects enumerated. In my opinion, such a suggested standardized form will assist the appraiser to more efficiently obtain data and to present the same intelligently and fully.

J. Frederick Sutherland, M.A.I.

Minneapolis, Minn.
February, 1937.

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Sexauer—On Appraising Real Estate By The Capitalization Method

GENERALLY speaking, there are three principal methods or approaches which may be used in the appraising of real estate:

The Comparative Method by which the value of a given property is estimated by reference or comparison to sales, leases, or appraisals of similar properties.

The Summation or Reproduction Cost Method by which the value is estimated by an estimate or reproducing both the land and the improvements. In the case of old buildings, or buildings which are not wholly suitable to the site, deductions from the new reproduction cost are made for depreciation and for obsolescence.

The Capitalization Method by which the value of the property is estimated in proportion to the income that will be produced.

All three approaches may and usually should be applied in the actual process of appraising any type of property, although more or less weight may be accorded to the result under each approach depending upon the conditions.

This discussion, however, is linked to the capitalization method of approach only. The subject may be developed along the following lines:

1. Classes of properties in which the capitalization method would usually be accorded the greater weight.
2. Data necessary to provide a base for a capitalization appraisal.
3. Methods that may be used for depreciation or amortization of the building investment or other wasting portions of the property.
4. The selection of a rate for capitalization.
5. Mathematical methods for calculating the capitalized value.
6. Checking the capitalized value.

Briefly the capitalization method is usually applied to those properties that are normally owned by one person and used by others under payment of rent or other compensation. It may also be used in cases where the property is occupied and used by the owner, but might be rented to others. Specifically, the capitalization

method of appraising is especially adaptable in placing a value on:

Land located in good retail or commercial districts which can be leased for use over long periods.

Retail store properties or combination store, office, and apartment buildings.

Apartment buildings.

Theatres that are not of the institutional type.

Office Buildings.

Hotels.

It might also be used in some cases in appraising small factory buildings or institutional buildings which are no longer to be converted into some income use. A rough form of capitalization is sometimes used in appraising single dwellings, usually as a check against other methods of appraising. The method has some value in these cases as a check, but it can rarely be used as the sole basis for determining the value of a single dwelling that will continue to be used as a dwelling.

The value of real estate has been defined as: "The present worth of the future benefits to be derived from its ownership."

This is the foundation of the capitalization method. The first step is to determine as accurately as possible the amount of the future "benefits" or income. In practice, this resolves itself into a matter of determining the income derived from the property in the past, if the records can be secured; gathering all of the data to establish the actual income at the time you are making the apraisal; and, finally, using judgment and experience to form an estimate of the trend of the income results during the remaining useful life of the property.

The data as to past performance is useful only as a base and check upon other figures, but it can be most helpful in estimating futures. Very often it will disclose items of expense that occur only at intervals of years, but which affect the income results materially. The following is an outline of the principal data necessary to compute the income from a property:

Income Data:

Rental schedule for all tenants.

Receipts from services, such as laundry, telephone, sale of waste paper, remetering of electricity.

Lease data, length of term, rentals, allowances or deposits of rent, special provisions.

Expense Data:

Taxes and assessments.

Insurance premiums—fire, compensation, elevator and public liability, plate glass, boiler.

Janitor or staff wages.

Janitor supplies.

Water.

Electricity and power.

Gas.

Fuel or steam cost.

Repairs and maintenance of building and equipment.

Decorating.

Replacements of equipment or furniture (of such nature as to be treated as "expense").

License fees or inspections.

Advertising and legal expense.

Management, collection, accounting.

Vacancies or non-collection losses.

If such a schedule of income and expense for the property being appraised is prepared, the balance remaining after deducting the expenses from the income would represent the annual net cash return to an owner who had title to the property free from encumbrances.

Let us assume that this has been done for a store and apartment building upon the basis of present conditions, reflecting a total income figure of $10,000 a year and a total expense figure, including a reserve for vacancies, of $4,000 a year, leaving a net income of $6,000 a year.

That gives the present income from the property, but the controlling factor in the value is the future income. It is in the estimating of that future income that the greatest degree of judgment is necessary, and where the opinion of appraisers may vary widely. In order to forecast the future results, estimates of the trend or course of rental rates and also the trend of each one of the items of expense must be made. These estimates will require an analysis of the possible changes in the

neighborhood, trends of retail business, the physical condition of the improvements as they may affect rentals or expenses, and the possible useful life of the improvements.

Let us assume that this analysis has been made with the result that the net income is found to increase by $300 a year for the next five years until it reaches a net of $7,500 a year, and that it will then tend to decrease gradually so that at the end of twenty years from now the net income will be nil or a minus quantity. Stated briefly, the income results are:

First 5 years	average $6,900 a year
Next 5 years	average $6,000 a year
Next 5 years	average $3,500 a year
Next 5 years	average $1,000 a year

It is an axiom of investment theory that the rate of income return on the amount invested should be in proportion to the risk assumed; that is, if the amount of the income is uncertain, or the security for the return of the principal may be lessened, then the rate should be higher than if there is no risk that the income may be reduced and no danger of loss of principal.

In most real estate investments, there is a building involved which will eventually disintegrate physically and which may become unsuitable for profitable use even before its physical life is exhausted. Therefore, we know that the amount invested in the building improvements must be reduced by considering that a part of the income each year is really a part payment of principal.

Therefore, in setting up a rate of return to apply to a real estate investment, we should cover these three points:

1. Some annual deduction from income that will be considered as a return of the principal invested to offset the physical depreciation of the building improvements, so that the total investment in these items will be returned during the useful life of the improvements. This may be termed the depreciation allowance.
2. A safe return on the amount invested, that is, a rate that will be at least equal to the return that could be secured on a mortgage on the class of property involved.
3. An additional allowance that will act to compensate for the risk assumed by complete ownership through variations in income caused by unforeseen conditions or for complete failure of income.

All of this is somewhat academic, but it indicates the basis upon which to compare the rates that may apply to various kinds of property. In actual practice, among most appraisers and, more to the point, among practically all purchasers of investment property, all of these factors are lumped together into one combined rate. The appraiser, to keep abreast of market conditions, should keep in touch with actual sales and determine wherever possible the basis upon which such sales were made as against the income results.

It is especially important right now that appraisers and brokers keep in touch with sales that are made and exchange all the information available as to the basis of such sales, because there is a very definite trend toward lower rates of return on all investments—bonds, stocks, mortgages, and real estate. It is only by testing the market that we can determine accurately what rates should be used. The investing public may be willing to accept lower rates of return than the appraiser would use in his appraisal, and in that case it is the appraiser who is out of step.

There are various theories and methods of providing for the depreciation or amortization of the portion of the value that may be assigned to the building. Some of these methods are highly involved and cannot be covered in this discussion.

As previously stated, the value of real estate has been defined as, "The present worth of future benefits to be derived from ownership." "Present worth" means the value at this time of some sum of money to be received in the future. A dollar in hand today is worth exactly a dollar, but a dollar to be received each year for the next five years is not worth five dollars

today. Some discount must be taken, and the amount of the discount will depend upon the interest rate used in computing it. The investor who buys a parcel of real estate is buying a series of income returns extending years into the future, and the present value of that real estate to him is the total of the "present worths" of the incomes that he expects to get.

Getting back to the store and apartment building mentioned, which had a net income of $6,000 today, which was estimated to increase each year for five years and then decrease for fifteen years, the problem of appraising that property would involve determining the present worth of the following:

$6,900 a year average for the next five years.
$6,000 a year average for the succeeding five years.
$3,500 a year average for the succeeding five years.
$1,000 a year average for the last five years.
The reversionary land value after twenty years.

Let us assume now that the purchaser of this property demands a return of eight per cent net on his investment (which he may figure as six per cent for a safe return plus two per cent to offset the risks of ownership). Let us assume further that the land involved would have a fair value today of $10,000 and that it will have the same value twenty years from now. The computation of the present worths must necessarily be done through the use of tables prepared for that purpose, and which are contained in most appraisal manuals. Using such tables for a basis, our computations of value result in:

Present worth of $6,900 a year for 5 years upon 8% basis is 3.993x6,900, or	$27,551
Present worth of $6,000 a year for the next 5 yrs. is 2.717x6,000, or	16,302
Present worth of $3,500 a year for the next 5 yrs. is 1.849x3,500, or	6,471
Present worth of $1,000 a year for the last 5 yrs. is 1.259x1,000, or	1,259
Present worth of a reversion of $10,000 after 20 yrs. at 8% is .2145x10,000, or	2,145
Total Present Worths of income and reversion	$53,728

If the investor paid the sum of $53,728 for the property and received the net incomes that were estimated for each year, he would receive eight per cent on the actual amounts invested from time to time; he would also receive enough additional to pay back to him $43,728 of his investment, so that at the end of twenty years he could consider that he had only $10,000 still left in the property, and if the improvements were worthless at that time, the land would remain to cover his $10,000 investment.

This method of calculating takes care of the depreciation or amortization of the building improvements without setting up any other schedule for such depreciation.

It is intended to cover in this discussion the process of applying the capitalization method. It must be stressed that such a computation does not necessarily constitute a proper or final estimate of value. This is simply one of the approaches to the value estimate. However, it would usually be given material if not actually controlling weight in the appraisal of property such as that used herein as an example.

George C. Sexauer, M.A.I.
Detroit, Mich.
February, 1937.

What to Read

Comments on recent surveys, books, and articles of interest to real estate appraisers.

Carrie Maude Jones, Editor **Librarian, American Institute of Real Estate Appraisers**

BOOK REVIEWS

Bonbright, James C. THE VALUATION OF PROPERTY. *New York, McGraw-Hill, 1937. 1271 pp., 2 vols. $12.00.*

"When I use a word,' Humpty Dumpty said, in a rather scornful tone, 'it means just what I choose it to mean—neither more nor less.'

"The question is,' said Alice, 'whether you *can* make words mean so many different things.'"

Lewis Carroll in *Through the Looking Glass.*

THUS does Professor Bonbright aptly introduce his work, just off the press.

So frequently do valuation treatises remind us of the President's proposal for the Supreme Court—*my* way is the *only* way—that any book on valuation written from the more objective attitude of research is at once a relief and an encouragement. Often appraisers' discussions of "value" seem to proceed from the idea that "right or wrong" each exponent of an idea *must* be heard. To be heard or not to be heard, seems to be the question. Rarely is the question asked: What do others think? How do economists, jurists, accountants, investment analysts, and other appraisers look at "value," and what are the results of their uses of the word? Especially in the court room, where "value" definitions are subjected to scrutiny and to interpretations that are vital to local and national welfare, does this little word assume an importance of unbelievable proportions.

The able appraiser to whom real estate valuations are not the only valuations, and whose interests are not confined to the small world of the beginner, may open "The Valuation of Property" at any page and find material so interesting and so ably treated that he will find it difficult to stop reading.

Those who hold that "value is value," like "pigs is pigs," and who naively fail to sense the difficulties the human race is having in learning to think and use words may, it is hoped, find this book something of an awakening, an excursion to a new place, a set of new problems which throw out a challenge that will not be denied.

"The Valuation of Property," by James C. Bonbright, presents, probably for the first time in the history of American law, a critical review of the principles of valuation applied by the courts in the major fields of property law. As a background for this study, it develops general theories of valuation with reference to modern trends in economics as well as in professional appraising.

To the appraiser, the striking feature of the book is its relatively narrow scope and the comprehensiveness of its treatment. The author is here concerned with only that part of valuation which has to do with property and which has legal significance, but in so doing he has packed 1271 pages with valuable material. He and his associates have spent years searching volumes of law cases and economists' writings. The scope is narrow enough to allow 100 pages (Part I) of reference to and criticism of "value" concepts and 120 pages (Part II) of analyses of methods of valuation as dependent on meaning of value and measurement of value. The balance of the two volumes (Part III) is devoted to valuations for specific legal purposes—such as indemnity; fire insurance; condemnation; public utility regulation; general property, estate, inheritance, income, and corporate stock taxation; bankruptcy; foreclosure; reorganization; and several other purposes. Each of these contains abundant cita-

tions of court rulings, analyses of theory, and, frequently, suggestions which make this an almost invaluable guide and reference book for appraisers, attorneys, judges, legislators, accountants, assessors, and commerce commissioners. Each of the interests owes Mr. Bonbright its expression of appreciation for making available in one publication such a comprehensive treatise of well-organized, interesting material on the subject of property valuation. As to the appraiser who has any variety of valuation work, let him but glance at the complete list of chapters, and he will immediately want to have these two volumes constantly within his reach.

The very first page presents the problem of judicial valuation by referring to a public utility company of a cash construction cost of $10,000,000; bond and stock issues of $15,000,000; value for rate-making purposes of $11,000,000, which valuation was appealed to the Supreme Court for ruling on "fair value" and changed to $13,000,000; assessed for tax purposes at $8,000,000; later foreclosed and sold at an upset price of $5,000,000; reorganized at par value of $12,000,000 over strenuous objections on the part of counsel for the cities served by the company; and finally taken over as a state-owned enterprise by power of eminent domain with a resultant, confirmed award of $16,000,000. This imaginary utility company's five materially different values illustrate the general types of valuations for legal purposes out of which arise problems that become very acute when some of these different values are based, supposedly at least, upon identical concepts of value.

Because the author selects an example from the public utility field, it does not follow that real estate or other fields are slighted; on the contrary, through almost every paragraph, the real estate appraiser will feel that the discussion concerns his own work and its problems. The book reflects constantly the particular reader's interests, and at no time are the general principles and problems of valuation ignored or neglected.

Having presented the problem, the author delves into the uses of words, quoting Justice Brandeis: "Value is a word of many meanings," (as are most words, according to the dictionaries) and Justice Holmes: "A word is not a crystal, transparent and unchanged; it is the skin of living thought, and may vary greatly in color and content according to the circumstances and the time in which it is used."

He then explores and criticizes the concepts of property value, especially as outlined by well-known economists, and brings out the two major problems of valuation: (1) securing a definition of "value" acceptable for the purpose of the particular inquiry and (2) determining the method by which the quantum of this value shall be estimated; in legal language, the (1) "fact to be found" (substantive law) and (2) proof of this "fact" (law of evidence).

At a time when appraisal societies are growing rapidly and many attempts are being made to "define value" and to revise appraisal terminology, Mr. Bonbright's comments are very appropriate when he points out that value has *two* basic concepts: (1) market value and (2) value to the owner. Such terms as "real value" and "fair market value" are attempts to straddle these two basic concepts, usually disastrously. "Value for use" faces the troubles of early utilitarian ethics. "Present worth," as in Appraisal Terminology (pages 50 and 58), is indefinite because "worth" is merely a synonym of "value." Furthermore, one wonders in vain: Worth to whom?

Cost and value are not synonymous because cost refers to the price paid for value. Cost is the sacrifice, value, the benefit. Yet, "by and large, the courts have been ready to assume a far closer correspondence between value and cost . . . than unprejudiced experts would concede to be warranted, or than intelligent businessmen or investors have accepted as a basis for purchase and sale."

"Fair value" arises in public utility cases. The Supreme Court has used this term to straddle the two basic concepts, "market value" and "value to the owner," thus throwing the law of public utilities into serious confusion. By making regulation unbearably confused, the Court may have done much toward bringing government ownership to this field.

"Much of the difficulty in using 'value' is the tendency of the courts, in common with other persons, to think of value as something inherent in the thing valued, rather than as an attitude of persons toward that thing in view of its estimated capacity to perform a service."

The concept involving "a willing buyer and a willing seller" is considered as incantation and a great bar to clear thinking in law.

Methods of valuation (Part II), though ably treated from a viewpoint somewhat unique to the professional appraiser, are of less spectacular interest than "concepts" because most appraisal treatises usually deal rather fully with "methods." Yet the comments and quotations on actual sales prices, actual costs, original costs, replacement costs, depreciation, and capitalized income will be found very excellent reading.

Valuation for specific legal purposes (Part III) will be the heart of the book to many readers, especially attorneys, judges, and legislators. Each important type of valuation is developed from numerous cases. This part is largely a body of reference material but is also nicely interspersed with theory, criticism, and suggestions.

Mr. Bonbright's position and interests singularly qualify him for this work. He is Professor of Finance at Columbia University and Vice Chairman of the Power Authority of the State of New York. His special interests are public utility regulation and corporation finance. His writings on valuation have appeared in the Harvard and the Columbia Law Reviews, the Quarterly Journal of Economics, the Proceedings of the National Tax Association, the Accounting Review, and other similar publications during the past decade.

The book presents the results of research in legal and economic theories of property valuation, prepared under the auspices of the Columbia University Council for Research in the Social Sciences. Started in 1925, the study continued through "boom" and "depression" years, thus giving the book a mature vitality for which the reader acquires a wholesome respect.

The final chapter, entitled "Conclusions," is as fascinating and timely an article as can be found in any contemporary writing on legal valuations. It briefly reviews the material of the book, the problems facing the courts, and the problems arising out of legal interpretations, leading directly to the currently "hot" argument on the function of the Supreme Court. Here the issue arises from opposing legal attitudes: the traditional verbalist versus the realistic functionalist. The controversy between these two schools of thought comes from the fact that the "functionalists" say both groups use words which vary in meaning according to the circumstances of different cases and that they, the "functionalists," are honest about their linguistic philanderings but that the "verbalists" are not.

Concerning the courts as valuators, the author infers that they are inclined to compromise, to stress simplicity of methods, to seek "fairness" rather than adherence to nice definitions; that they frequently prefer "evidence of value" to "value" itself, are partial to replacement cost as "proof" of value, and usually try to follow expert procedure of accountants, economists, and appraisers.

Concerning the appraiser, he infers "the distinguishing mark of the expert is that he is always seeking correctives and rebuttals for attentive assumptions that a given property is worth what it did or would cost, or what it sold for, or what it earned per annum multiplied by a conventional number of years' purchase and so forth," also that he is an artist, that he sets himself up as a critic of the market of which he is a part, and that he might be more fully appreciated by more thoughtfully explaining what he is trying to do.

To the appraiser "The Valuation of Property" should be at once a guide to his further pursuit of study and a challenge to the constant refinement of his interests and his professional objectives.

MORRIS B. ASHTON.

Chicago, Illinois.

* * *

Association of Appraisal Executives. BASIC STANDARDS OF APPRAISAL PRACTICE AND PROCEDURE. *Washington, D. C., Association of Appraisal Executives, 1936. 53 pp.*

PACKED with much meat" is this small pamphlet of fifty-three pages which is the result of three years of intensive deliberation on the part of various committees of the Association of Appraisal Executives and general discussions at its meetings. In the past five years several appraisal associations have been born. In each organization the first item on the program of activities has been the recognition of confusion in terminology and principles, and the second step has been an honest effort on the part of each association to clarify definitions and concepts. This pamphlet is the contribution of the Association of Appraisal Executives and is a valuable basic text in the fundamentals of scientific appraising.

Part I deals with Appraisal Practice and Procedure, and after a very brief introduction it takes up immediately general concepts, followed by a section on the appraiser, principles of valuation, standards of procedure, and the appraiser's report. Part II is concerned with Definitions of a Selected List of Appraisal Terms, and Part III gives a Code of Ethics for Independent Public Appraisers.

As an illustration of the scope of the study, the following variations of "that much fought over term" *value* are defined: actual, appraised, attached business, book, capitalized, cash, fair, forced sale, for use, going, going concern, good will, insurable, intrinsic, leasehold, liquidation, market, market price, prudent, realization, reuse, sales, salvage, scrap, and sound. The term value also receives major consideration in the section devoted to general concepts and principles of valuation.

This book purports to embody principles which will serve only as a basis for future discussions, and in recording fundamentals it is a splendid beginning. As a concise statement of the trend of appraisal thinking, it should receive the careful consideration of every man who treats his business seriously.

Carrie Maude Jones.

Chicago, Illinois.

* * *

Cleminshaw, J. M., Company. FARM BUILDING APPRAISERS MANUAL, *Cleveland, J. M. Cleminshaw Company, 1935. 165 pp. $1.50.*

"FARM Building Appraisers Manual" published by the J. M. Cleminshaw Company, is a concise and condensed work to be used as a basis in appraising farm buildings anywhere in the United States.

Buildings are classified in three divisions: Grade A, Grade B, and Grade C, with some variations of plus or minus on these classifications.

The construction costs used, such as retail prices and wage scales, are based upon the rural costs in northern Ohio at the time the book was published in 1935. A table of comparison with costs in other states is given so that proper adjustment can be made for each state in the Union.

It is an interesting book and will be of value to anyone engaged in farm appraisal, but as the factors to be considered change from time to time, allowance for this must be made as well as for local conditions that cannot be covered in a work as broad as this one. A table for depreciation of the various types of buildings is also given.

The foundation of the appraisal method outlined is that the value of a building from a sale or tax standpoint is the sum which the presence of that building adds to the value of the land it occupies. This is a broad statement from which to start, and while the book covers completely the replacement costs, it does not deal with the other factors which enter into a proper appraisal of farm buildings. In few cases would the replacement cost be the appraisal value.

In this manner the book falls short of its goal as an appraiser's manual, as it deals entirely with replacement cost and gives no help to the other problems and contributing factors to a true appraisal of farm buildings.

This manual should be valuable and useful on summation appraisals for insurance purposes and tax purposes or any appraisals wherein the value estimated by this method is used. The values arrived at by the methods used could not be added to the land value in determining the economic value of the buildings to the land as constituting the market value.

J. C. MCNAGHTEN, M.A.I.
Hutchinson, Kansas.

Rules of Professional Ethics

of the

American Institute of Real Estate Appraisers

(As revised January 27-28, 1937)

ARTICLE I

Fees

SECTION 1. It is unethical for an appraiser to accept an engagement to appraise a property if his employment or fee is contingent upon his reporting a predetermined or specified amount of value, or is otherwise contingent upon any finding to be reported.

SECTION 2. It is unethical for an appraiser retained in cases where monetary damages are involved to make his compensation contingent upon the amount of or to fix his compensation as a percentage of the damages which may be agreed upon or finally decreed.

ARTICLE II

Commissions and Favors

SECTION 1. It is unethical for an appraiser to accept any commission, favor, or emolument, in connection with the appraising of a property, other than a fair professional fee for the responsibility entailed and the work and expense involved.

ARTICLE III

Disinterested Appraisals

SECTION 1. It is unethical for an appraiser to issue an appraisal report if he is acting or intending to act in the capacity of broker, loan broker, or manager, or if he has an ownership, contemplated future ownership, or any other interest in connection with the property appraised, unless such interest or interests be fully disclosed in the appraisal certificate.

ARTICLE IV

Hypothetical Appraisals

SECTION 1. It is unethical for an appraiser to issue an appraisal report in which the reported valuation is based upon predicted rentals and expenses unless he describes in detail in his report the basis for his prediction.

In particular, it is unethical for an appraiser to certify a valuation predicated upon assumed rentals and expenses, which he does not feel certain are highly probable of achievement under ordinary competent management.

SECTION 2. It is unethical for an appraiser to issue an unqualified appraisal report on an investment property, which does not reflect the effects of existing leases upon the value of the property.

SECTION 3. It is unethical for an appraiser to issue an appraisal report in which the reported value is based upon the completion of public or private improvements which are not assured unless he clearly states that the appraisal is made on that hypothesis. In any event, he must state in his report the conditions with regard to such improvements which he assumes in determining the value reported.

SECTION 4. It is unethical for an appraiser to issue an appraisal report in which the reported value is based upon the assumed absence of any legal restriction, unless such assumption is reasonable or in accord with legal opinion accepted by the appraiser, and unless the legal authority and his opinion are quoted in the appraisal certificate, and it is expressly stated that the appraisal is contingent on such lawful restriction being changed or absent in accordance with the assumption.

ARTICLE V*

Fractional Appraisals

SECTION 1. It is unethical for an appraiser to issue an appraisal report on only

(*It is not intended that anything in these Articles V and VI shall be construed to prevent an appraiser from preparing and presenting fractional appraisals or summation appraisals where such appraisals are required for rate making, cost accounting, and other special purposes where the concept of cost independent from value may be appropriately involved.)

a part of a whole property unless he specifically states that it is a fractional appraisal and as such can be used only in a manner consistent with such limitations.

SECTION 2. In appraising the security for a loan it is unethical for an appraiser to issue a certificate covering anything less than all of the property designated as security for the loan unless conditions and limitations of the use of the report are clearly stated.

SECTION 3. In appraising the security for a leasehold loan, it is unethical for an appraiser to issue a certificate of value of the improvement only, omitting the value of the leasehold, which latter may be positive, zero, or negative.

ARTICLE VI*

Summation Appraisals

SECTION 1. It is unethical for an appraiser to issue an appraisal report on a property in which the total reported value is derived by adding together the values of fractional parts of the property unless the limitations are clearly stated or other and conclusive evidence is given that this result equals the total value of the property considered as a whole.

ARTICLE VII

Economic Probabilities and Value of Property

SECTION 1. It is unethical for an appraiser to issue an appraisal report on a construction project which does not give the appraiser's opinion on the economic soundness of the project.

SECTION 2. It is unethical for an appraiser to issue an appraisal report on a construction project without also reporting his estimate of the reasonably expected earnings of the project, and an opinion as to the reasonable time required to attain normal occupancy.

ARTICLE VIII

Duty to Hold Findings Confidential

SECTION 1. It is the duty of an appraiser to hold as confidential the results and other findings of his appraisal until released from his obligation by the client or by due process of law.

ARTICLE IX

Expert Testimony

SECTION 1. In giving testimony as to the value of real property in any court or before any other legally constituted tribunal, an appraiser may follow rules of procedure as to appraisal method legally binding in that jurisdiction even though such rules may be at variance with the provisions of these Rules of Professional Ethics.

ARTICLE X

Contents of Appraisal Reports

SECTION 1. It is unethical for an appraiser to omit any of the following from his appraisal report:

A. An unequivocal and reasonably complete description of the property appraised.

B. A statement of any contingent conditions upon which this appraisal has been based. For example: (a) the validity of legal, engineering, or auditing opinions used; (b) the completion of projected public or private improvements; (c) that management is assumed to be competent and the ownership to be in responsible hands.

C. The date or time at which the value obtains.

D. The amount of the value.

E. A statement that the undersigned appraiser has no present or contemplated future interest in the property appraised; or a statement disclosing all such interests which the undersigned appraiser may have in the property appraised.

F. In case the property appraised is a fractional part of the property of a type covered by these Rules of Professional Ethics, a statement that the value reported is invalidated if used in making a summation appraisal of the property as a

whole unless conditions and limitations of the use of the report are clearly stated.

SECTION 2. It is recommended that each appraisal report should contain a statement or certificate, substantially in the following form:

> I (We), the undersigned do hereby certify that to the best of my (our) knowledge and belief the statements and opinions contained in this appraisal are correct, subject to the limiting conditions herein set forth; also, that this appraisal has been made in conformity with the Rules of Professional Ethics of the American Institute of Real Estate Appraisers of the National Association of Real Estate Boards.

ARTICLE XI

Advertising

SECTION 1. It is unethical for a member of the Institute to advertise his professional attainments or services except in a dignified manner in keeping with high professional standards.

Public notices should preferably be limited to an advertisement of the name, professional titles including M.A.I. (Member of the American Institute of Real Estate Appraisers of the National Association of Real Estate Boards), class of service, address of the advertiser, without any other qualifying word or letters or, in the case of announcement of change of address, the plain statement of the fact for the publication of which the announcement purports to be made.

Cards permitted by this rule when appearing in newspapers shall not exceed two columns in width and three inches in depth; when appearing in magazines, directories, and similar publications, cards shall not exceed one-fourth of a page in size. This rule shall not be construed to inhibit the proper and professional dissemination of impersonal information among a member's own clients or personal associates or the properly restricted circulation of bulletins containing professional information.

SECTION 2. It is ethical, however, for an appraiser of the Institute to carry an announcement in a classified directory, as follows: "JOHN DOE, M.A.I., Address, Telephone Number," under the subdivision REAL ESTATE APPRAISALS.

ARTICLE XII

Relations with the Institute and Fellow Members

SECTION 1. No member shall conduct himself in such a manner as to prejudice his professional status or the reputation of the Institute.

SECTION 2. Any oral or written statement by any member with reference to his affiliation with the Institute that is not specific and exact shall be construed to be professional misconduct under Article VI, Section 2, of the By-Laws, and subject to immediate disciplinary action.

SECTION 3. It is unethical for any member to use the advantages of a salaried position to compete unfairly with other members of the Institute.

SECTION 4. It is unethical for any member to injure falsely or maliciously, directly or indirectly, the professional reputation, prospects, or business of another member.

SECTION 5. It is unethical for any member to attempt to supplant another member after definite steps have been taken toward his employment.

SECTION 6. It is unethical for any member to compete with another member upon the basis of professional charges by reducing his usual charges and in this manner attempting to underbid after having been informed of the charges named by the other member.

* * *

New Members

Admitted to the Grade of Member

THOMAS N. RYAN, FORESTVILLE (BRISTOL), CONNECTICUT. Born, Norwich, Connecticut, November, 1884; Realtor and appraiser; owner, T. N. Ryan Coal Company; active member of the Bristol (Conn.) Real Estate Board; professional territory covers the state of Connecticut; studied Principles of Real Estate, Real Estate Appraising, and Real Estate Law in Hillyer Schools, Hartford, Connecticut; more than ten years' experience in real estate appraising, including the valuation of homes, apartments, stores, industrial property, farms, and special purpose properties; experienced in building construction; more than ten years' experience in residential sales.

RALPH D. NIXON, WICHITA, KANSAS. Born, Kelso, Kansas, August, 1896; full time salaried appraiser for Home Owners' Loan Corporation; individual member of the National Association of Real Estate Boards; professional territory covers Kansas, Colorado, Oklahoma, and Missouri; nine years' experience in appraising real property, including the valuation of business property, apartment properties, residential properties, and farm lands; qualified in court as an expert on the values of residential properties in 1930; has appraised for the National Savings Life Insurance Company and the National Savings & Loan Company; one year's experience in building of duplexes and four-family apartment buildings.

F. EVERETT COLE, WORCESTER, MASSACHUSETTS. Born, Worcester, Massachusetts, December, 1895; in business under own name in general real estate and insurance since 1923; member and former Director of the Worcester Real Estate Board; professional territory covers Worcester and fifty-mile radius; A.B. degree, Clark University, 1916; licensed fire loss adjustor in the state of Massachusetts; eleven years' experience in appraising, including residential, store, loft, vacant, apartment, and farm properties; qualified in court as an expert on the value of apartments and retail business property; has appraised property for the Aetna Life Insurance Company, the Worcester Cooperative Bank, the Equity Cooperative Bank, the Home Cooperative Bank, and the Wachusett & Clinton Cooperative; has had experience in the building of fifty-two houses and two stores; more than thirteen years' experience in residential sales.

HENRY H. LAMMERS, JACKSON, MICHIGAN. Born, Grass Lake, Michigan, May, 1874; sole owner of Lammers Agency; engaged in general real estate and insurance business; Secretary-Treasurer of United Land Contract and Mortgage Company; Chairman of Southern Michigan Appraisal Company; Secretary-Treasurer, Jackson County Taxpayers' League; Chairman, Jackson County Allocation Board; former Vice President and President, Jackson County Realty Board; professional territory covers lower Michigan; author and lecturer; sixteen years' experience in the appraising of real property, including the valuation of residences, wholesale houses, right-of-ways, and business property; licensed real estate broker in the state of Michigan 1915 to date; qualified in court as an expert on the value of business properties in 1932; has appraised for the Michigan Securities Commission, the Bell Telephone Company, the Central State Bank, Jackson Savings & Loan Association, and others; twenty years' experience in residential construction; thirty years' experience in residential sales.

E. HOLLAND JOHNSON, NEW ORLEANS, LOUISIANA. Born, Mayville, North Dakota, July, 1885; Chairman of Appraisal Committee of Real Estate Board of New Orleans; Fee Appraiser for the Central Appraisal Bureau, New Orleans; Fee Appraiser for Home Owners' Loan Corporation for three years; active broker member of the Real Estate Board of New Orleans; professional territory covers Louisiana and Mississippi; B.A. degree from Redwing Theological Seminary, Red Wing, Minnesota; completed Commercial Courses at same institution; appraisal experience covers eleven years in the general real estate business, with more intensive appraisal work during the last three years; licensed real estate salesman from 1925-1930, inclusive; licensed real estate broker from 1930 to date; qualified in court as an expert on the value of vacant property in 1936; experienced in building construction; appraisal experience includes the valuation of vacant, single-family homes, apartment properties, commercial buildings, and industrial property.

J. BURROWS JOHNSON, NEW ORLEANS, LOUISIANA. Born, Lynchburg, Virginia, November, 1892; in business under own name as Realtor in New Orleans; Director, Metairie Park, Inc.; Director, Sterling Investment Company, Inc.; member of the Real Estate Board of New Orleans; professional territory covers New Orleans, Orleans, Jefferson, and St. Tammany Parishes; studied engineering for a short time at Tulane University; took engineering course through American School of Correspondence;

eight years' experience in appraising real estate, including the valuation of industrial property, commercial property, suburban subdivision residence property, bank buildings, and apartment buildings; licensed Real Estate Broker since 1926; qualified in court as an expert on the value of residential property; has appraised for Canal Bank & Trust Company, the National Bank of Commerce, the Pelican Homestead Association, and has been Fee Valuator for the F.H.A. since February 1, 1935; nine years' residential sales experience.

MAX J. DERBES, NEW ORLEANS, LOUISIANA. Born, New Orleans, Louisiana, February, 1900; active member of the Real Estate Board of New Orleans; Director, Louisiana Real Estate Association; President, Louisiana Real Estate Appraisal Society; Member, Society of Residential Appraisers, Chicago, Illinois; professional territory covers Orleans, Jefferson, St. Bernard, St. Tammany, and Plaquemine Parishes in state of Louisiana; lecturer and author; A.B. degree from St. Aloysius College; graduate of La Salle Extension University, Accounting Course; experienced as Cost Accountant for Mexican Petroleum Corporation, 1919-1924, during which time this company built all types of buildings, stills, streets, electric systems, etc., it being Mr. Derbes' task to keep detailed costs on these construction projects; nine years' experience in the appraisal of real property, including the valuation of office buildings, stores, residential property, and semi-commercial property; qualified in court as an expert on the value of vacant and residential property; Director and Secretary of A. C. Williamson, Inc., builders of homes in New Orleans, 1921-1924; Sales Manager, Standard Materials Company, Jacksonville, Florida, manufacturers of ready-cut and sectional homes, 1925-1927; experienced in residential sales over a period of several years.

GILBERT N. SWETT, MAPLEWOOD, NEW JERSEY. Born, Roxbury, Massachusetts, April, 1896; President and sole owner, Mansfield & Swett, Inc. (established 1926), conducting general real estate business including brokerage, property management, appraising, insurance, etc.; professional territory covers Oranges and Maplewood primarily, suburban Essex and Union Counties, also Morris County; active member of the Oranges and Maplewood Real Estate Board; author and lecturer; has made between 400 and 500 H.O.L.C. appraisals; bulk of appraisal experience has been the valuation of one-family residential properties; retained as expert witness by the state of New Jersey on the Railroads' Tax Appeal Case in 1935; has appraised for the North Jersey Title Insurance Company, Fidelity Union Title & M. G. Company, Fidelity Union Trust Company, Fidelity Construction Company, and about 100 individuals; A.B. degree from Dartmouth College; one year of Tuck School of Business Administration and Finance; President, Board of Realtors of the Oranges and Maplewood in 1930-31; member of the Board of Governors, State Association, 1932.

ROBERT H. ARMSTRONG, NEW YORK, NEW YORK. Born, New York City, November, 1900; President, New York Chapter, National Association of Real Estate Boards; partner in Armstrong & Armstrong; Trustee and Secretary of the Board, Institute for Economic Research; lecturer in the School of Land Economics; member, American Economic Association; member, American Statistical Association; professional territory covers the boroughs of Manhattan, Bronx, and New York City; lecturer and author; graduate of Columbia University; two years' special work in New York Law School; ten years' experience in appraising, including vacant, apartment, loft, club, commercial, and residential properties; qualified in court as an expert on the valuation of residential and business properties; managing agent of approximately 100 properties; twelve years' experience in residential sales.

HARRY K. KELLER, NEW YORK, NEW YORK. Born, New York City, May, 1899; Chief Appraiser, Mortgage Commission of the state of New York; Appraisal Consultant, Institute of Economic Research; individual member of the National Association of Real Estate Boards; professional territory covers New York, Bronx, and Westchester Counties; attended Georgia School of Technology, New York University, and Columbia University; fifteen years' experience in the appraisal of real property, including the valuation of all types of property typically found in metropolitan areas; qualified in court as an expert on the value of various classes of real estate in 1933 and since; has appraised for the New York Title and Mortgage Company; experienced in the construction of single-family homes in Westchester County; from October, 1934, to June, 1935, was associated with the State of New York Insurance Department, in rehabilitation, of the New York Title & Mortgage Company, having complete charge of the mortgages and real estate, comprising some $40,000,000 of the company's assets; for many years prior to October, 1934, was associated with James R. Murphy, Inc., where he prepared the corporation appraisals of all classes of real estate.

CHARLES S. JENKINS, AKRON, OHIO. Born, Wilmington, Ohio, September, 1880; President of The Jenkins Realty Company; President of The Brewster Arlington Land Company; Class A member of the Akron Real Estate Board; pro-

fessional territory covers Summit, Portage, Medina, Stark, and Wayne Counties in Ohio; public school teacher for a number of years; organized a class in real estate appraising in the Akron Real Estate Board and taught it for a part of the time; twenty-two years' experience in the appraising of real estate, including the valuation of farms, reservoirs, street widening projects, banks, public utility properties, etc.; has allotted and sold several subdivisions; has served as Chairman of the Appraisal Committee of the Akron Real Estate Board for five years; has testified in court as an expert on real estate values for many years.

LIONEL FRIEDMANN, PHILADELPHIA, PENNSLYVANIA. Born, Philadelphia, Pennsylvania, December, 1884; member, Philadelphia Real Estate Board; professional territory covers Philadelphia and adjoining counties; twenty years' experience in the valuation of real property, including theatres, stores, office buildings, residences, etc.

ROBERT RICKS, AMARILLO, TEXAS. Born, Mansfield, Louisiana, 1887; head of the firm of Ricks-Atwood Realty Company for ten years; Fee Appraiser for Home Owners' Loan Corporation in twenty-five Texas Counties; member, Amarillo Zoning Appeal Board; active member, Amarillo Real Estate Board; professional territory covers the Texas Panhandle, eastern New Mexico, and western Oklahoma; author and lecturer; eighteen years' experience in estimating values, including ten years of actual appraisal experience; qualified in court as an expert on the value of leaseholds; has appraised for the Amarillo Clearing House, the First Federal of Amarillo, the First Federal of Pampa, and other financial institutions; eighteen years of residential sales experience; appraisal experience includes the appraisal of residences, vacant property, banks, warehouses, filling stations, apartment houses, farms, etc.

WERNER KIEPE, SALT LAKE CITY, UTAH. Born, Schwelm, Germany, May, 1900; Secretary-Treasurer, Salt Lake Real Estate Board; Secretary-Treasurer, Apartment House Association of Utah; Secretary-Treasurer, Utah State Realty Association; Manager, Kiepe-Christensen Building Company; professional territory covers Salt Lake City and surrounding territory; graduate of the School of Business Administration, University of Utah, 1926; attended Institute Case-Study Courses I and II in 1935; taught classes in Real Estate Practice and Real Estate Appraising; nine years' experience in appraisal of real property, including valuation of homes, gas stations, apartments, stores, and vacant properties; local fee appraiser for The Investors Syndicate of Minneapolis.

ADMITTED TO ASSOCIATE MEMBER GRADE

(Corrected Copy)

ARTHUR A. MAY, DETROIT, MICHIGAN. Born, Detroit, Michigan, January, 1893; 1922-1931 Vice-President and General Manager, Realty Development Corporation, subdividers and developers; 1931-1933 President, Arthur A. May, Inc., general brokerage; 1934-1936 Vice President, Scratch, May and Canavan, real estate consultants and valuators; October, 1933, appointed Fee Appraiser, Home Owners' Loan Corporation; August, 1934, appointed Assistant District Appraiser; January 16, 1935, appointed State Appraiser for Michigan; December 1, 1935, appointed Regional Appraiser; professional territory at present covers the entire states of Michigan and Indiana; owner member, Detroit Real Estate Board; author of various monographs and articles on appraisal practices, also lecturer and teacher of the same; qualified in the Supreme Court of the Province of Ontario as an appraiser of real property for the purpose of fixing inheritance taxes; ten years' experience in the appraisal of real estate, including the valuation of homes, stores, farm properties, apartment buildings, and land valuations in eminent domain practice.

American Institute of Real Estate Appraisers

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610 National City Bank Building, Cleveland, Ohio
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Southwest Region
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22 West Monroe Street, Chicago, Illinois
Mark Levy ..... Treasurer
22 West Monroe Street, Chicago, Illinois
Harry Grant Atkinson ..... Director of Activities
22 West Monroe Street, Chicago, Illinois

Governing Council

Term Expiring December 31, 1939

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John R. Hoyt, New York, New York
Morton G. Thalhimer, Richmond, Virginia
Lewis C. Sholes, Omaha, Nebraska
John B. Green, St. Petersburg, Florida

Term Expiring December 31, 1938

James W. Cree, Jr., Pittsburgh, Pennsylvania
J. Alvin Register, Jacksonville, Florida
George L. Schmutz, Los Angeles, California
Ralph V. Field, Galesburg, Illinois
Newton C. Farr, Chicago, Illinois
George W. Drennan, Detroit, Michigan
Henry S. Miller, Dallas, Texas
Maurice R. Massey, Philadelphia, Pennsylvania
Frank M. Mc Curdy, Brooklyn, New York

Term Expiring December 31, 1937

A. C. Houghton, Washington, D. C.
Wm. H. Ballard, Boston, Massachusetts
Hill Ferguson, Birmingham, Alabama
Arthur S. Kirk, Des Moines, Iowa
Ralph D. Baker, Camden, New Jersey
R. W. Patton, San Antonio, Texas
Wm. A. Eastman, Seattle, Washington
Edward Eagan, Syracuse, New York
James J. Grogan, Cincinnati, Ohio

Past Presidents on the Governing Council

Philip W. Kniskern, Philadelphia, Pennsylvania
(Term Expiring December 31, 1939)
Joseph B. Hall, St. Louis, Missouri
(Term Expiring December 31, 1940)
Harry E. Gilbert, Baltimore, Maryland
(Term Expiring December 31, 1940)
Maurice F. Reidy, Worcester, Massachusetts
(Term Expiring December 31, 1941)

Representing Board of Directors, N.A.R.E.B.

Joseph Laronge, Cleveland, Ohio

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President—Edward J. Maier, Newark
Vice President—William W. Chalmers, Camden
Treasurer—John K. Leeds, Elizabeth
Secretary—Franklin J. Hannoch, Newark

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President—John B. Green, St. Petersburg
Vice President—Adrian Mc Cune, Miami
Treasurer—Frank J. Anderson, West Palm Beach
Secretary—Harry J. Wood, Fort Myers

Ohio Chapter Number 3

President—Howard W. Etchen, Toledo
Vice President—Warren L. Morris, Cleveland
Treasurer—Albert J. Mayer, Cincinnati
Secretary—Rufus Lisle, Dayton

New York City Chapter Number 4

President—John R. Hoyt, Manhattan
Vice President—Wm. F. Mac Dermott, Jamaica
Vice President—George H. Gray, Brooklyn
Vice President—Irving I. Rosenbaum, Manhattan
Treasurer—Edward C. Heald, Yonkers
Secretary—Charles J. Fladwell, Manhattan

California Chapter Number 5

President—Charles B. Shattuck, Los Angeles
Vice President—Thomas F. Mason, Wilmington
Secretary and Treasurer—John W. Salmon, Los Angeles

Illinois Chapter Number 6

President—Newton C. Farr, Chicago
Vice President—Leo Dailey, Waukegan
Treasurer—Isaac Keim, Chicago
Secretary—Henry George Slavik, Chicago

New England Chapter Number 7

President—Charles T. Lincoln, New Haven, Conn.
Vice President—John C. Kiley, Boston, Mass.
Secretary and Treasurer—Everett N. Slade, Fall River, Mass.

Washington State Chapter Number 8

President—Walter G. McLean, Seattle
Vice President—J. C. McQuigg, Seattle
Secretary and Treasurer—J. H. Sparkman, Seattle

Philadelphia Chapter Number 9

President—Philip W. Kniskern, Philadelphia
Vice President—Frank P. Felton, Jr., Philadelphia
Vice President—Robert J. Nash, Philadelphia
Treasurer—C. Harry Johnson, Philadelphia
Secretary—S. Craig Kane, Jr., Philadelphia

Michigan Chapter Number 10

President—Henry N. Johnson, Detroit
Vice President—Charles H. Warden, Grand Rapids
Secretary and Treasurer—George C. Sexauer, Detroit

Committees

Standing Committees

(See pages 198 to 202, Roster of Members, for addresses.)

ADMISSIONS COMMITTEE

Ralph V. Field, Galesburg, Ill., General Chairman
Herman O. Walther, Chicago, Ill., Chairman, Examination Committee
Warren L. Morris, Cleveland, O., Chairman, Appraisal Report Committee
C. F. Curry, Kansas City, Mo.
Frank P. Felton, Jr., Philadelphia, Penn.
Hill Ferguson, Birmingham, Ala.
W. E. Ferguson, Baltimore, Md.
Morris Goldfarb, Perth Amboy, N. J.
Bracton Goldstone, New York, N. Y.
James J. Grogan, Cincinnati, O.
John R. Hoyt, New York, N. Y.
T. F. Merrick, Long Beach, Calif.
Henry S. Miller, Dallas, Tex.
A. C. Newell, Seattle, Wash.
C. Walton Rex, Orlando, Fla.
John W. Roberts, Indianapolis, Ind.
Paul F. Semonin, Sr., Louisville, Ky.
George C. Sexauer, Detroit, Mich.
Charles B. Shattuck, Los Angeles, Calif.
Everett N. Slade, Fall River, Mass.
J. Frederick Sutherland, Minneapolis, Minn.

BY-LAWS COMMITTEE

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Chester A. Dougherty, St. Louis, Mo.
Arthur B. Hall, Chicago, Ill.
Joseph Laronge, Cleveland, O.
Edward J. Maier, Newark, N. J.
T. F. Merrick, Long Beach, Calif.
J. Alvin Register, Jacksonville, Fla.

DISCIPLINARY COMMITTEE

George W. Drennan, Detroit, Mich., Chairman
Graham Aldis, Chicago, Ill.
William W. Chalmers, Camden, N. J.
J. Mortimer Clark, Long Beach, Calif.
Charles J. Daly, St. Louis, Mo.
Wm. F. MacDermott, Jamaica, N. Y.
Harry E. Gilbert, Baltimore, Md.
John M. Hutchinson, Waterbury, Conn.
P. Lincoln Mitchell, Cincinnati, O.
R. W. Patton, San Antonio, Tex.

EDUCATION AND RESEARCH COMMITTEE

K. Lee Hyder, Milwaukee, Wis., General Chairman

Sub-committee on Research

Thurston H. Ross, Los Angeles, Calif., Chairman
Frederick M. Babcock, Washington, D. C.
Frank D. Hall, New York, N. Y.
Philip W. Kniskern, Philadelphia, Penn.
Cuthbert E. Reeves, Buffalo, N. Y.

Sub-committee on Education

George L. Schmutz, Los Angeles, Calif., Chairman
Frederick A. Bond, Philadelphia, Penn.
W. G. Burchfield, Houston, Tex.
Fred L. Chapman, Minneapolis, Minn.
Raymond T. Cragin, Cleveland, O.
Harry S. Cutmore, Chicago, Ill.
Leonard Downie, Washington, D. C.
Ayers J. du Bois, Washington, D. C.
Ralph V. Field, Galesburg, Ill.
Victor J. Free, Cleveland, O.
John B. Green, St. Petersburg, Fla.
Curt C. Mack, St. Louis, Mo.
Edward J. Maier, Newark, N. J.
Isidoro Quintana, Hackensack, N. J.
John B. Spilker, Cincinnati, O.
Morton G. Thalhimer, Richmond, Va.
Ivan A. Thorson, Los Angeles, Calif.
Herman O. Walther, Chicago, Ill.

ETHICS COMMITTEE

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Charles P. Glover, Tampa, Fla.
George H. Gray, Brooklyn, N. Y.
Peter Hanson, Glendale, Calif.
Arthur C. Houghton, Washington, D. C.
Henry N. Johnson, Detroit, Mich.
Charles T. Lincoln, New Haven, Conn.
Norman L. Newhall, Minneapolis, Minn.
Frank H. Taylor, East Orange, N. J.

FINANCE COMMITTEE

Wm. H. Ballard, Boston, Mass., Chairman
J. W. Cree, Jr., Pittsburgh, Penn.
Joseph B. Hall, St. Louis, Mo.
Clyde A. King, Tulsa, Okla.
Mark Levy, Chicago, Ill.

LOCAL CHAPTERS COMMITTEE

John R. Hoyt, New York, N. Y., Chairman
Talmage D. Auble, Cleveland, O.
Henry M. Clark, Springfield, Mass.
Wm. A. Eastman, Seattle, Wash.
Harry Goldstine, Chicago, Ill.
Joseph W. Hannauer, St. Louis, Mo.
Henry N. Johnson, Detroit, Mich.
Arthur S. Kirk, Des Moines, Iowa
George A. Kuhn, Indianapolis, Ind.
Nathan Libott, Los Angeles, Calif.
Edward J. Maier, Newark, N. J.
J. W. Pat Murphy, Dallas, Tex.
Robert J. Nash, Philadelphia, Penn.
D. Earl Wilson, Miami, Fla.
Harry J. Wood, Fort Myers, Fla.

MEMBERSHIP COMMITTEE

Philip W. Kniskern, Philadelphia, Penn., Chairman
Wm. H. Ballard, Boston, Mass.
George W. Drennan, Detroit, Mich.
Wm. A. Eastman, Seattle, Wash.
K. Lee Hyder, Milwaukee, Wis.
Frank M. McCurdy, Brooklyn, N. Y.
Henry S. Miller, Dallas, Tex.
J. Alvin Register, Jacksonville, Fla.
George L. Schmutz, Los Angeles, Calif.

PUBLIC RELATIONS COMMITTEE

Arthur C. Houghton, Washington, D. C., Chairman
Ralph D. Baker, Camden, N. J.
Howard W. Etchen, Toledo, O.
Newton C. Farr, Chicago, Ill.
John B. Green, St. Petersburg, Fla.
John R. Hoyt, New York, N. Y.
Henry N. Johnson, Detroit, Mich.
Philip W. Kniskern, Philadelphia, Penn.
Charles T. Lincoln, New Haven, Conn.
Edward J. Maier, Newark, N. J.
Walter G. McLean, Seattle, Wash.
Charles B. Shattuck, Los Angeles, Calif.
Edwin L. Somerville, Minneapolis, Minn.

REPRESENTATIVES ON THE PERMANENT COMMITTEE OF THE INTERNATIONAL FEDERATION OF SURVEYORS

Philip W. Kniskern, Philadelphia, Penn., Chairman
Harry E. Gilbert, Baltimore, Md.
Arthur C. Houghton, Washington, D. C.
E. L. Ostendorf, Cleveland, O.
Maurice F. Reidy, Worcester, Mass.

Special Committees

COMMITTEE TO NOMINATE GOVERNING COUNCILLORS

Maurice F. Reidy, Worcester, Mass., Chairman
J. Mortimer Clark, Long Beach, Calif.
Joseph W. Hannauer, St. Louis, Mo.
Maurice R. Massey, Philadelphia, Penn.
Leonard P. Reaume, Detroit, Mich.
C. Walton Rex, Orlando, Fla.
Morton G. Thalhimer, Richmond, Va.

COMMITTEE TO NOMINATE OFFICERS

Joseph B. Hall, St. Louis, Mo., Chairman
Harry E. Gilbert, Baltimore, Md.
George L. Schmutz, Los Angeles, Calif.

TAX PROCEDURE COMMITTEE

Warren L. Morris, Cleveland, O., Chairman
Harry S. Cutmore, Chicago, Ill.
Harry E. Gilbert, Baltimore, Md.
John A. Linnett, Newark, N. J.
Ivan A. Thorson, Los Angeles, Calif.

ROSTER OF MEMBERS

(Figures in parenthesis following names indicate the Certificate Number issued to each Member, and the order of election.)

ALABAMA

Birmingham
John D. Chichester (228) .....708 Jackson Bldg.
Frank B. Clark (261) .....408 N. 21st St.
Hill Ferguson (242).....221 N. 21st St.
Harold M. Henderson (215) .....2115 1st Ave.

ARIZONA

Phoenix
Leonard M. Cowley (523).....15 W. Monroe St.

ARKANSAS

Little Rock
Lawrence Witherspoon (531).....508 Donaghey Bldg.

CALIFORNIA

Burlingame
Nathaniel B. Bender (347).....1422 Bellevue Ave.

Eagle Rock
Cloice D. Carll (410) .....5376 Vincent Ave.

Glendale
Peter Hanson (11) .....221 Arden Ave.

Long Beach
J. Mortimer Clark (50).....262 Lindero Ave.
J. C. Hoffman (71).....307 F. & M. Bank Bldg.
A. G. Maspero (51).....409 Security Bldg.
T. F. Merrick (27) .....Heartwell Bldg.

Los Angeles
Raymond F. Ahern (424).....1939 N. Hobart Blvd.
Ralph Brashear (36).....4157 W. 5th St.
David W. Bush (197).....616 O. T. Johnson Bldg.
George H. Coffin, Jr. (216)...408 Hollywood Security Bldg.
Ayers J. duBois (107).....7079 Hollywood Blvd.
Arthur L. Layden (104).....437 N. Windsor Blvd.
Nathan Libott (84).....6253 Hollywood Blvd.
Stanley L. McMichael (25).....6785 Whitley Terrace
Thurston H. Ross (427).....3465 Knollcrest Ave.
John W. Salmon (208).....2912 Brighton Ave.
D. D. Sayer, Jr. (278).....4100 E. 9th St.
George L. Schmutz (192).....8703 Santa Monica Blvd.
Charles B. Shattuck (110).....2510 S. Vermont Ave.
Ivan A. Thorson (199).....500 Corporation Bldg.
Fred E. Vincent (212).....3440 Winslow Drive
Richard C. Willis (321).....2221 W. 21st St.

Oakland
W. S. Guilford (46).Athens Athletic Club, 12th & Clay Sts.
Harold W. Jewett (527).....1819 Franklin St.
James G. Stafford (54).....5820 Presley Way

Pasadena
Louis M. Pratt (411) .....164 N. Hudson Ave.

Sacramento
Mark Cheesman (189) .....2964 Govan Way
A. J. Delano (126).....809 J St.
Thomas G. Mapel (367).....809 J St.

San Diego
Victor R. Lundy (532).....923 Seventh Ave.

San Francisco
W. G. Harris (430).....315 Montgomery St.
George I. Noyes (295).....821 Market St.
Edwin G. Wendland (342).....821 Market St., Room 562

San Gabriel
Frank C. Wood, Jr. (326).....420 Segovia Ave.

Southgate
Louis R. Ardouin (265).....2931 Willow Place

Wilmington
Thomas Francis Mason (151).....Box 122

COLORADO

Denver
Arthur D. Wall (519).....813 Majestic Bldg.

CONNECTICUT

Darien
G. LeRoy Kemp (533).....179 Boston Post Road

Forestville
Thomas N. Ryan (554).....Pleasant Ave.

Hartford
Joseph P. Kennedy (24).....720 Main St.
Aubrey Maddock (507).....50 State St.
H. Martin Tenney (534).....140 Garden St.

New Britain
William G. Dunn (535).....272 Main St.

New Haven
George B. Horan (275).....151 Court St.
Wm. M. Hotchkiss (436).....205 Church St.
Charles T. Lincoln (265).....205 Church St.

Stamford
Richard W. Fitch (231).....292 Main St.

Waterbury
John M. Hutchinson (500).....195 North Main St.

DISTRICT OF COLUMBIA

Washington
Harold E. Doyle (82).....738 15th St., N. W.
Joseph A. Herbert, Jr. (69).....515 E. Capitol St.
A. C. Houghton (72).....909 15th St., N. W.
Morton J. Luchs (178).....1505 H St., N. W.
F. Eliot Middleton (280).....Investment Bldg.
Charles H. Tompkins (337).....1630 Connecticut Ave.
Curtis Walker (196).....Tower Bldg.

Members in Government Service:
Frederick M. Babcock (435).....Federal Housing Adm.
Wm. D. Burkheimer (309) .....
.....(FHA) 3726 Connecticut Ave., N. W.
Warren S. Dean (313).....(HOLC) 1619 R St.
Leonard Downie (296).....HOLC Bldg.
Ayers J. duBois (107).....Federal Housing Adm.
J. W. Graham (83).....(FHA) Vermont and K St.
David L. Montonna (416).....F. H. A.
Geo. P. Williams (387).....410 HOLC Bldg.

FLORIDA

Fort Myers
Harry J. Wood (187).....1112 1st St.

Jacksonville
V. M. Covington (48).....1316 Graham Bldg.
Louis R. Fendig (44).....23 Buckman Bldg.
Myron L. Howard (73).....516 Professional Bldg.
J. Alvin Register (4).....114 Graham Bldg.
Bainbridge Richardson (59).....117 W. Forsyth St.
Walter D. Shelly (217).....414 Greenleaf Bldg.
L. K. Tucker, Jr. (150).....319 W. Forsyth St.

Lakeland
Ernest Stephen Allsopp (517).....Marble Arcade
John L. Wright (243).....117 S. Tenn. Ave.

Miami
Hollis Bush (98).....P. O. Box 1030
Kenneth S. Keyes (115).....15 W. Flagler St.
Adrian McCune (74).....1017 Security Bldg.
D. Earl Wilson (80).....1017 Security Bldg.

Orlando
George F. Brass (160).....P. O. Box 1052
Harold V. Condict (161).....Box 1052
C. W. Rex (42).....Box 293
J. C. Stewart (166).....112 N. Orange Ave.

Sarasota
Fred L. Palmer (127).....482 Main St.

St. Petersburg
John B. Green (308).....11 4th St., N.
Warren P. Hunnicutt (338).....302 Central Ave.

Tampa
Charles P. Glover (139).....811 Citrus Exchange Bldg.

Vero Beach
Frank R. Jewett (143).....P. O. Box Q

West Palm Beach
Frank J. Anderson (223).....611 Harvey Bldg.

GEORGIA

Atlanta
Bryan M. Grant (147).....206 Grant Bldg.
Robert R. Otis (256).....15 Auburn Ave.

TERRITORY OF HAWAII

Honolulu
Charles J. Pietsch (417).....927 Fort St.

ILLINOIS

Calumet City
George N. Becker (245).....138 Pulaski Rd.

Chicago
Graham Aldis (365).....53 W. Jackson Blvd.
Louis B. Beardslee (405).....100 N. LaSalle St.
George Becker (518).....11 S. LaSalle St.
Kenneth Calhoun Brown (210).....110 S. Dearborn St.
Harry S. Cutmore (194).....1411 1st Natl. Bk. Bldg.
Dominick Dunn (370).....1330 Morse Ave.
Newton C. Farr (400).....140 S. Dearborn St.
Fred F. Gardner (530).....134 S. LaSalle St.
Harry Goldstine (350).....134 N. LaSalle St.
Earl George Gubbins (383).....6015 Lincoln Ave.
Arthur B. Hall (403).....407 S. Dearborn St.
John P. Hooker (52).....140 S. Dearborn St.
A. K. Hornof (173).....1411 1st Natl. Bank Bldg.
Ward T. Huston (209).....110 S. Dearborn St.
Isaac Keim (324).....2526 S. Wabash Ave.
Arthur Kruggel (341).....4865 Broadway
Walter R. Kuehnle (124).....140 S. Dearborn St.
J. Alton Lauren (442).....100 N. LaSalle St.
Mark Levy (9).....22 W. Monroe St.
Paul C. Loeber (399).....111 W. Washington St.
Ernest H. Lyons (195).....120 S. LaSalle St.
William C. McLennan (414).....6675 Northwest Highway
Francis E. Manierre (402).....5 S. Wabash Ave.
Orlo O. Montague (514).....1374 First Natl. Bk. Bldg.
Donald T. Morrison (382).....100 North LaSalle St.
William E. Mosby (297).....8032 Cottage Grove Ave.
Hyde W. Perce (406).....40 N. Dearborn St.
Lester W. Porter (407).....231 S. LaSalle St.
Geo. R. Quin (191).....36 S. State St.
Gilbert H. Scribner (401).....1st Natl. Bk. Bldg.
Henry George Slavik (301).....10 S. LaSalle St.
John Milton Trainer (404).....30 N. Michigan Ave.
Percy E. Wagner (318).....F.H.A., 134 N. LaSalle St.
Herman O. Walther (363).....111 S. Dearborn St.
J. Soule Warterfield (120).....8 S. Dearborn St.
Albert H. Wetten (408).....141 W. Jackson Blvd.

Galesburg
Ralph V. Field (168).....203 Bk. of Galesburg Bldg.

Joliet
William W. Mollan (288).....405 D'Arcy Bldg.

Peoria
James H. Finnegan (428).....415 Peoria Life Bldg.

Springfield
John J. Savage (536).....620 Illinois Bldg.

Waukegan
Leo Dailey (388).....2 S. County St.
Oscar Soderquist (125).....22 Maple Ave.

INDIANA

East Chicago
Leonard C. Smith (440).....4534 Indianapolis Blvd.

Fort Wayne
Claude L. Baker (129).....R. F. D. No. 2

Gary
Charles D. Davidson (244).....504 Broadway
J. R. Davidson (123).....504 Broadway

Hammond
Samuel C. Ennis (203).....1st Trust Bldg.

Indianapolis
George A. Kuhn (35).....706 Guaranty Bldg.
Frank B. McKibbin (96).....1154 Consolidated Bldg.
John W. Roberts (448).....428 Illinois Bldg.

South Bend
Richard A. Muessel (537).....205 Income Bldg.

IOWA

Cedar Rapids
John J. Wagner (266).....408 American Trust Bldg.

Des Moines
Arthur S. Kirk (188).....900 Grand Ave.

Sioux City
Willard L. Frost (21).....Security Bank Bldg.

KANSAS

Hutchinson
J. C. McNaghten (116).....1st Natl. Bk. Bldg.

Topeka
David Neiswanger (426).....115 W. 6th Ave.

Wichita
Ralph D. Nixon (555).....144 N. Rutan Ave.

KENTUCKY

Louisville
I. Sidney Jenkins (334).....Louisville Trust Bldg.
Paul F. Semonin, Sr. (359).....321 Starks Bldg.

LOUISIANA

New Orleans
Max J. Derbes (560).....823 Perdido St.
E. Holland Johnson (558).....811 Perdido St.
J. Burrows Johnson (559).....339 Carondelet St.

Shreveport
T. S. Neal (224).....330 Ricou-Brewster Bldg.
R. S. Whitten (351).....210 Milam St.

MARYLAND

Baltimore
Oregon Milton Dennis (132)....211 New Amsterdam Bldg.
W. E. Ferguson (47).....100 E. Pleasant St.
Harry E. Gilbert (18).....2 E. Lexington St.
Albert C. Hofrichter (162).....2 E. Lexington St.
John E. McGovern (316).....H.O.L.C., Equitable Bldg.
Chas. H. Steffey (88).....336 N. Charles St.
Carroll Wright (314 .....Baltimore Trust Bldg.

MASSACHUSETTS

Boston
W. H. Ballard (41).....45 Milk St.
Arthur B. Brooks (509).....18 Tremont St.
Edwin Deering Brooks (510).....18 Tremont St.
Edward F. Cassell (122).....18 Tremont St.
George L. DeBlois (505).....11 Pemberton Square
Norman W. Kenny (10).....82 Devonshire St.
John C. Kiley (397).....45 Bromfield St.
Arthur N. Maddison (504).....11 Pemberton Square
Robert C. Nordblom (336).....18 Oliver St.
George S. Parker (502).....87 Milk St.
Stephen W. Sleeper (508).....31 Milk St.
Robert S. Wayland (506).....10 State St.
Parker Webb (538).....24 Milk St.

Brockton
Charles H. McKenney, Jr. (423).....106 Maine St.

Fall River
J. Frederick Beckett (167).....49 Purchase St.
Myer Markell (165).....160 Bank St.
Everett N. Slade (53).....57 N. Main St.

Lowell
John C. Percival (233) .....36 John St.

Springfield
Henry M. Clark (287).....100 Broadway
Bion T. Wheeler (339).....1562 Main St.

Worcester
Francis S. Bailey (524).....2 Foster St.
F. Everett Cole (556).....5 Pleasant St.
Charles A. Kabley (501).....340 Main St.
Maurice F. Reidy (8).....2 Foster St.

MICHIGAN

Detroit
Judson Bradway (392).....533 Majestic Bldg.
Matthew Carey (389).....2149 Union Guardian Bldg.
George W. Drennan (358).....300 Penobscot Bldg.
Guy S. Greene (394).....300 Lafayette Blvd.
Donald D. James (539).....2350 Penobscot Bldg.
Henry N. Johnson (390).....300 Penobscot Bldg.
Albert D. MacRae (540).....Union Guardian Bldg.
Alfred W. Palmer (312).....1920 Union Guardian Bldg.
Edmund T. Paterson (385).....3050 E. Grand Blvd.
Leonard P. Reaume (393).....2150 Buhl Bldg.
George C. Sexauer (395).....2150 Buhl Bldg.
William W. Tanney (434).....9061 W. Outer Drive
Clarence S. Vaughn (422)..2103 First National Bank Bldg.
Carl S. Wells (391).....2706 Eaton Tower

Grand Rapids
J. G. Lloyd Alexander (246).....616 Murray Bldg.
Isaac Blandford (234).....105 Federal Square Bldg.
Leon T. Closterhouse (247).....
.....American Home Security Bank
John Garfield Emery (304).....400 Central Bank Bldg.
Harry J. Fuller (235).....The Michigan Trust Co.
Walter S. Palmer (193).....104 Federal Square Bldg.
Arent Van Stensel (248)...1006 G. R. Savings Bank Bldg.
Charles H. Warden (229).....535 Michigan Trust Bldg.

Jackson
Henry H. Lammers (557).....508 Dwight Bldg.

Lansing
Edward G. Hacker (291).....219 W. Washtenaw St.

Pontiac
Paul A. Kern (134).....31 Oakland Ave.

MINNESOTA

Duluth
Richard W. Northup (379).....17 Phoenix Bldg.

Minneapolis
Fred L. Chapman (411).....115 S. 5th St.
Norman L. Newhall (32).....519 Marquette Ave.
Edwin L. Somerville (30).....519 Metropolitan Bank Bldg.
J. Frederick Sutherland (331).....
.....1477 Northwestern Bk. Bldg.

MISSISSIPPI

Jackson
J. O. Manning (299).....3012 N. State St.

MISSOURI

Clayton
Gunther Meier (319).....18 N. Meramec
Joplin
Rolla E. Stephens (264).....711 Virginia Ave.
Kansas City
George M. Bliss (360).....17 E. 10th St.
C. F. Curry (345).....921 Baltimore Ave.
Herbert B. Patt (553).....417 R. A. Long Bldg.
E. F. Pierson (289).....311 Commerce Bldg.
St. Louis
W. C. Bernard (91).....317 N. 11th St.
William W. Butts (93).....803 Chestnut St.
Herbert O. Byrd (302).....818 Chestnut St.
Charles J. Daly (94).....801 Chestnut St.
Otto J. Dickmann (225).....623 Chestnut St.
Chester A. Dougherty (249).....109 N. 7th St.
J. Gregory Driscoll (528).....1501 Locust St.
John H. Farish (201).....713 Chestnut St.
Grover Godwin (418).....212 New Federal Bldg.
Joseph B. Hall (2).....1311 S. 39th St.
Joseph W. Hannauer (15).....811 Chestnut St.
Alfred B. Kissack (525).....915 Olive St.
Curt C. Mack (449).....714 Chestnut St.
Monroe H. Rodemyer (218).....109 N. 8th St.
N. S. Wood (131).....709 Chestnut St.

NEBRASKA

Lincoln
C. C. Kimball (381).....228 Stuart Bldg.
Omaha
E. H. Bideau (541).....621 Woodmen of the World Bldg.
C. D. Glover (67).....913 City Natl. Bldg.
Lewis C. Sholes (23).....U. S. National Bank Bldg.
Clinton B. Stuht (33).....Aquila Court Bldg.

NEW JERSEY

Atlantic City
Maurice A. Kelley (325).....20 S. Tennessee Ave.
Butler
Frank B. Fay, Jr. (171).....Fayson Lake
Camden
Ralph D. Baker (60).....924 Broadway
W. W. Chalmers (63).....4th & Federal Sts.
J. William Markeim (86).....4th & Federal Sts.
Abraham J. Rosenfeld (213).....114 N. Broadway
Leon E. Todd (340).....2623 Westfield Ave.
Philip Zinman (95).....333 Arch St.
East Orange
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